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ORIGINAL ARTICLE

The effects of spiritual wellbeing on life satisfaction in hematologic cancer patients aged 65 and older in Turkey: mediating role of hope

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Key words: *haematologic cancers, hope, nurse, older adults, satisfaction life, spiritual wellbeing.*

Abstract

Background: The mediating role of hope in the effects of spiritual wellbeing on life satisfaction in elderly haematologic cancer patients in Turkey was investigated in the present study.

Methods: The study was conducted in a descriptive, cross-sectional and correlational design. The study was conducted with 150 patients aged 65 and older who were diagnosed with haematologic cancer and who were referred to a university hospital haematology clinic and outpatient clinic. Research data were collected with Descriptive Information Form, Dispositional Hope Scale (DHS), Spiritual Well-being Scale (FACIT-Sp-12) and Satisfaction with Life Scale (SWLS).

Results: FACIT-Sp-12 score was 37.25 ± 7.29; DHS score was 40.42 ± 8.29, SWLS score was 16.24 ± 8.79. FACIT-Sp-12 ($\beta = 0.668$) and DHS ($\beta = 0.226$) were found to affect SWLS positively. In terms of the effect of FACIT-Sp-12 on SWLS, DHS has a mediating role and makes the positive effect of FACIT-Sp-12 on SWLS stronger ($\beta = 0.771$).

Conclusions: Spiritual wellbeing levels of the participants in our study were found to be high, while their levels of satisfaction with life and hope were found to be moderate. It was also concluded that spiritual wellbeing had a direct effect on satisfaction with life and an indirect effect through the mediating role of hope.

INTRODUCTION

In today's conditions, the ratio of individuals over the age of 65 to the whole population is gradually increasing with longer average life expectancy in developed and developing countries.[1,2] Longer life expectancy leads to higher incidence of cancer, which is a global problem, and cancer-related mortality rates.[1,3] Among individuals aged 65 and older, cancer was reported to be the leading cause of death by World Health Organization (WHO) 2019 data,[4] while GLOBOCAN 2022 (*Estimated Cancer Incidence, Mortality and Prevalence Worldwide*) data reported that cancer incidence increased with age in individuals aged 65 and older.[5] One of the cancers causing significant morbidity and mortality in older adults is haematologic cancers. Half of the hematologic cancers classified as Hodgkin lymphoma, non-Hodgkin lymphoma, multiple myeloma and leukaemia occur in the population aged 65 and older and 70% of cancer-related deaths occur in this population.[6] It is also predicted that there will be an increase in the incidence of haematologic cancers in parallel with the increase in the population aged 65 and older until 2030.[7]

Old age is a period in which individuals experience physical, social and economic problems. In addition, situations such as losses in the family and a closed environment, decrease in social participation and role changes cause individuals to experience a large number of mental problems.[8] Chronic diseases such as cancer also cause individuals' lives to be

negatively affected. Therefore, spirituality comes to the fore while patients try to deal with these diseases.[9,10]

The word of spirituality is derived from the Latin 'spiritus', which can be translated as to breathe and to feel life.[11] While there are different definitions of spirituality, in general it is a personal search for the divine or transcendent, and also a search for a purpose and meaning in life, a sense of commitment, hope, and inner peace.[12] It can guide individuals to find meaning in life with more power than one has.[9,10] Especially in old age, having a strong spirituality is necessary to cope with chronic health problems, to participate actively in social life and to increase life satisfaction.[13,14] From a different perspective, having strong hopes in addition to strong spirituality can help cancer patients increase their life satisfaction with strength and courage against this difficult process brought by the disease.[15,16]

Hope can be expressed as a dynamic force that helps individuals to adjust to the future, to show interest in the future and to make life meaningful.[17] Especially in cancer patients, hope is very important since it helps in adjusting to the treatment process, increasing wellbeing and getting healthy.[15,18] It is also very important in helping individuals to effectively deal with the loss, uncertainty and pain of cancer. In addition to being the ability to dream and wish for something to happen, it is also the ability to make sure difficulties can be dealt with and reality can be managed. It is also important for a peaceful death.[17] While an increased level of hope increases good thoughts about life in cancer patients, it may also improve spirituality that helps individuals to find meaning from life[19,20] The main source of hope is spirituality, and studies have stated that spirituality positively affects hope.[21,22] In addition, a strong spirituality and hope can increase satisfaction with life and wellbeing in cancer patients by decreasing pain and suffering and causing calmness and wellbeing.[19,23]

It is expected that older populations will increase in the following years, and therefore there will be wider experience of complex treatment and care processes due to problems that ageing may bring, and cancer, which is frequent in this population.[24] In addition, the long duration of this disease, the uncertainty and risk of relapse can cause patients to have pessimistic feelings about life and significantly reduce life satisfaction.[25] For this reason, nurses can help to increase life satisfaction of patients through the assessment of spiritual wellbeing and hope levels of geriatric haematology patients and by conducting relevant practices.[19,26]

Not many studies were found in the literature examining spiritual wellbeing, satisfaction with life and hope in cancer patients all together.[19] The relationship between hope, life satisfaction and spiritual wellbeing in older individuals was investigated in one study.[27] The present study examined the mediating role of hope in the effect of spiritual wellbeing on life satisfaction in haematologic cancer patients aged 65 and over.

When haematological cancers are compared with other cancer types, it is a type of cancer that needs to be focused more on by health professionals due to both the parameters used in the diagnosis and comorbidity and the high mortality rate.[28] Therefore, it is inevitable that the psychological wellbeing of patients who experience these problems and the problems brought by old age will be negatively affected. It may be inevitable for elderly cancer patients to fall into despair as a result of experiencing these negative situations, and their mental wellbeing and life satisfaction may decrease. However, increasing wellbeing and life satisfaction by holding on to hope in these individuals has an important place in the development of the ability to adapt to stressors related to conditions that threaten their life processes.[19] Therefore, these three parameters are thought to be important indicators of the ability of elderly individuals to cope effectively with the losses experienced due to illness. When all this is considered, examining the mediating role of hope in the effect of spiritual wellbeing on life satisfaction may help to decrease physical and psychosocial symptoms of haematologic cancer patients aged 65 and over and make their psychological adjustment to the disease easier. Therefore, the present study aimed to research the mediating role of hope in the effects of spiritual wellbeing on life satisfaction in haematological cancer patients aged 65 and over in Turkey. Another aim of the study is to guide health professionals in providing psychological wellbeing in elderly haematological cancer patients.

Research questions

- What are the spiritual wellbeing, life satisfaction and hope levels of haematological cancer patients aged 65 and over in Turkey?
- What are the variables that affect spiritual wellbeing, life satisfaction and hope in haematological cancer patients aged 65 and over in Turkey?
- Is there a relationship between spiritual wellbeing, life satisfaction and hope levels in haematological cancer patients aged 65 and over in Turkey?
- Does hope have a mediating role in the effect of spiritual wellbeing on life satisfaction in haematological cancer patients aged 65 and over in Turkey?

METHODS

Research type

The study was conducted by using a cross-sectional correlational design.

Population and sample

Patients aged 65 and over with haematological cancer admitted to the Haematology Clinic and Outpatient Clinic of Fırat University Hospital between April 2022–February 2023 constituted the population of the study. One hundred and seventy patients were reached between these dates. Patients meeting the inclusion criteria (≥65 years of age, having a haematologic cancer diagnosis for at least 6 months, absence of psychiatric problems, volunteering to be included as a participant) between these dates were included in the sample. Since 17 patients refused to participate in the study and three were not meeting the research criteria, the study was completed with 150 patients (88% participation). Post hoc power analysis with G-Power 3.1.9.4 program found the effect size was 0.176, 0.05 significance level and the power of the study was 99% (the values used in this study; R^2 (0.152) value in regression analysis findings for prediction of spiritual wellbeing scale). The sample size can be said to be at the desired level with these values.[29]

Data collection tools

Descriptive Information Form, Dispositional Hope Scale (DHS), Spiritual Well-being Scale (FACIT-Sp-12) and Satisfaction with Life Scale (SWLS) are the tools used in the study to collect data.

Descriptive Information Form

There are eight questions in this form related to participants' socio-demographic (age, gender, working status, educational status, income status) and disease (diagnosis status, duration of diagnosis, status of having another chronic disease) characteristics, was prepared by the researchers.

DHS

Snyder *et al*. developed this scale to find out the dispositional hope levels in individuals aged ≥15 years.[30] The scale was adapted to Turkish culture by Tarhan and Bacanlı. DHS has 12 items and two dimensions.[31] The scale is an eight point Likert type measurement instrument. The two dimensions Alternative Ways Thinking and Actuating Thinking have four items each, one of which includes an expression about the past, two items include expressions about the present and the last item includes an expression about the future. The remaining four items consist of fillers not related with hope. While scoring the scale, filler items are not scored; the scores from Alternative Ways Thinking and Actuating Thinking dimensions are added and DHS total score is found. Possible scores are between eight and 64. Higher scores indicate higher hope levels. The original study[31] had a Cronbach's alpha internal consistency coefficient of 0.86, while this value was 0.85 in the present study.

FACIT-Sp-12

Peterman *et al*. developed FACIT-Sp-12 to analyze the levels of spiritual wellbeing in patients with chronic diseases and cancer.[32] Aktürk *et al*. studied Turkish validity and reliability.[33] The 12-item, five point Likert type scale is scored between zero and 48, with higher scores showing higher spiritual wellbeing. Three subscales are called Meaning (items 2, 3, 5, 8), Peace (items 1, 4, 6, 7) and Faith (items 9, 10, 11, 12). The Turkish validity and reliability study had a Cronbach alpha value of 0.87,[33] while the present study had a Cronbach alpha value of 0.81.

SWLS

The scale was developed by Diener *et al*. to find out life satisfaction of individuals. Dağlı and Naysal

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carried out the Turkish validity and reliability study.[34,35] The five-item Likert type scale is scored between one and seven as 'totally disagree' and 'totally agree'. The score participants can achieve from the scale varies between five and 35. Increased scores from the scale mean high satisfaction with life. Cronbach alpha was found as 0.88[35] and as 0.81 in the present study.

Data collection

The data were collected by the researcher between the specified dates using the Descriptive Information Form, DHS, FACIT-Sp-12, and SWLS through face-to-face interviews after the patients completed their outpatient appointments. The researcher read the questions on the forms to the participants and recorded their answers. It took approximately 15–20 min for each elderly person to answer the questions on the forms.

Data assessment

Data were analyzed with SPSS version 25.0. Descriptive statistics are shown as percentage, mean and standard deviation. Spearman's correlation analysis and multiple linear regression analysis were used to analyze the correlation between independent and dependent variables.

The effects of spiritual wellbeing on life satisfaction were examined with PROCESS macro regression analysis. Significance level was $P < 0.05$.

Ethical considerations

The study was initiated with permission from the ethics committee of a university (28.01.2022 dated and 2022/01 numbered) and from the institution where the study was conducted. Aims and methods of the study were explained to the participants and their written informed consents were obtained. The Declaration of Helsinki and its ethical standards were followed. Individuals who volunteered to participate were recruited and personal identity information was kept confidential.

RESULTS

It was found that 44.7% of the patients were between 65 and 74 years of age, 40.7% were female, 50% were not working, 36% were illiterate, 50% had income less than expense, 42.7% ($n = 64$) were diagnosed with lymphoma, 65.3% had a different chronic disease, and mean diagnosis duration was found as 1.94 ± 2.42 years (Table 1).

Table 1 Participant demographic characteristics ($N = 150$)

Variables	Mean ± SD	Min–max (median)
Diagnosis duration	1.94 ± 2.42 years	1–21 (1)
	n	**%**
Age groups		
65–74 years	67	44.7
75–84 years	57	38.0
85+ years	26	17.3
Gender		
Female	61	40.7
Male	89	59.3
Working status		
Retired	67	44.7
Not working	75	50.0
Working	8	5.3
Education status		
Illiterate	54	36.0
Literate	34	22.7
Primary school	28	18.7
Middle school	12	8.0
High school	9	6.0
University and higher	13	8.7
Income status		
Income = expense	50	33.3
Income>expense	25	16.7
Income<expense	75	50.0
Diagnosis		
Lymphoma	64	42.7
Multiple myeloma	55	36.7
Leukaemia	17	11.3
Leucistic disorder	11	7.3
Aplastic anaemia	3	2.0
Having another chronic disease		
Yes	98	65.3
No	52	34.7

Mean DHS score of the patients was found as 40.42 ± 8.29, while their Alternative Ways Thinking mean score was found as 19.99 ± 4.88 and their Actuating Thinking mean score was found as 20.43 ± 3.94. Mean FACIT-Sp-12 score of the patients was found as 37.25 ± 7.29, while their Meaning mean score was found as 12.07 ± 2.71, Peace mean score as 12.25 ± 2.56, and Belief mean score as 12.92 ± 3.06. SWLS mean score was found as 16.24 ± 8.79 (Table 2).

The effect of educational status on DHS was examined with simple linear regression analysis, and it was found to be statistically significant ($F = 6.907$, $P < 0.01$). The variable of educational status in the

Table 2 Mean measurement results of DHS, FACIT-Sp-12 and SWLS ($n = 150$)

Variables	Mean ± SD	Min–max (median)
DHS		
Alternative ways thinking	19.99 ± 4.88	5–29 (21)
Actuating thinking	20.43 ± 3.94	8–29 (21)
DHS total	40.42 ± 8.29	13–57 (42)
FACIT-Sp-12		
Meaning	12.07 ± 2.71	4–20 (12)
Peace	12.25 ± 2.56	4–20 (12)
Belief	12.92 ± 3.06	4–20 (13)
FACIT-Sp-12	37.25 ± 7.29	12–56 (37)
SWLS	16.24 ± 8.79	5–35 (15)

Abbreviations: DHS, Dispositional Hope Scale; FACIT-Sp-12, Spiritual Well-being Scale; SWLS, Satisfaction with Life Scale.

model explains 0.44% of DHS variance ($P < 0.01$). Regression coefficient shows that the state of being illiterate ($\beta = -0.211$, $P < 0.01$) affected DHS negatively and significantly (Table 3).

The effects of independent variables on FACIT-Sp-12 were examined with multiple linear regression analysis, and they were found to be statistically significant ($F = 3.668$, $P < 0.001$). There was 15.2% of FACIT-Sp-12 total variance which was explained by the independent variables in the model ($P < 0.01$). The state of having an additional chronic disease ($\beta = -0.177$, $P < 0.01$) was found to have a negative and significant effect on FACIT-Sp-12 (Table 4).

The effects of independent variables on SWLS were examined with multiple linear regression analysis and the results were found to be statistically significant ($F = 5.217$, $P < 0.001$). Independent variables in the model explain 15.3% of satisfaction with life total variance ($P < 0.01$). Having an educational status of university and higher was found to have a positive and significant effect on SWLS ($\beta = 0.209$, $P < 0.01$) (Table 5).

SPSS PROCESS macro 4 Model was used to show the effects of spiritual wellbeing on satisfaction with life and the mediating role of dispositional hope in this effect. (Fig. 1) and (Table 6) show the details of analysis results.

According to analysis results, both spiritual wellbeing ($\beta = 0.668$) and dispositional hope ($\beta = 0.226$) positively affect satisfaction with life. According to another result, DHS has a mediating role in the effect of spiritual wellbeing on satisfaction with life ($\beta = 0.103$) and spiritual wellbeing strengthens its positive effect on satisfaction with life ($\beta = 0.771$). These two variables were found to have a predictive effect of 44.7% in explaining satisfaction with life.

DISCUSSION

The results found in this study, which is the first to examine the mediating role of hope in the effects of spiritual wellbeing on satisfaction with life, were discussed in the light of the literature.

The patients aged 65 and older in this study were found to have high levels of spiritual wellbeing. In studies conducted with cancer patients of different types and stages, similar to our results, high spiritual wellbeing levels were found in cancer patients.[9,36–38] Unlike our study, moderate levels of spiritual wellbeing were reported in some studies conducted with cancer patients.[39–41] In addition, spiritual wellbeing was found to be high in studies conducted with individuals aged 65 and over.[27,41] Results in the literature mostly support the results of our study. Patients with serious diseases such as cancer are influenced by the disease process and in order to fight with and deal with the negative situations they face, they turn to spirituality more. Psychological and physiological problems experienced by cancer patients may be reduced by spiritual wellbeing.[9,37,40] Studies in the literature show that economic, health and social problems of individuals increase in old age; stress levels of older individuals increase with situations including death of a spouse or a close friend, retirement, and role changes, leading to mental problems such as depression and anxiety. In old age, coping with these problems is easier with

Table 3 Simple regression analysis results for prediction of DHS with independent variable

		Univariable				
Model	Variables	B	Standard error	Standard (B)	*t*	*P*
1	Education-illiterate	−3.637	1.384	−0.211	−2.628	**0.001***

Note: $F = 6.907$, $R = 0.211$, $R^2 = 0.044$, $P < 0.05$. Bold value is the significance value. * $P < 0.01$.

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Table 4 Multiple linear regression analysis results for prediction of FACIT-Sp-12 with independent variable

		Univariable					Multivariable				
Model	Variables	B	Standard error	Standard (B)	T	*P*	B	Standard error	Standard (B)	*t*	*P*
1	The state of having additional chronic disease	−2.890	1.231	−0.189	−2.347	**0.001***	−2.699	1.269	−0.177	−2.126	**0.035****
	Working status-retired	2.872	1.177	0.197	2.440	**0.001***	2.128	2.713	0.146	0.784	0.434
	Working status-working	−3.267	1.163	−0.225	−2.809	**0.001***	0.337	2.751	0.023	0.122	0.903
	Income status-income>expense	4.888	1.550	0.251	3.153	**0.001***	1.399	1.986	0.072	0.705	0.482
	Income status-income<expense	−4.040	1.147	−0.278	−3.524	**0.001***	−2.197	1.337	−0.151	−1.643	0.103
	Educational status-illiterate	−2.787	1.222	−0.184	−2.281	**0.001***	−0.921	1.311	−0.061	−0.702	0.484
	Educational status-university	5.794	2.067	0.225	2.803	**0.001***	2.859	2.413	0.111	1.185	0.238

Note: $F = 3.668$, $R = 0.391$, $R^2 = 0.152$, $P < 0.05$. Bold values are the significant values. * $P < 0.01$; ** $P < 0.05$.

Table 5 Multiple linear regression analysis results for prediction of Satisfaction with Life Scale with independent variable

		Univariable					Multivariable				
Model	Variables	B	Standard error	Standard (B)	*t*	*P*	B	Standard error	Standard (B)	*t*	*P*
1	Working status-retired	4.260	1.406	0.242	3.03	**0.001***	1.807	3.192	0.103	0.566	0.572
	Working status-not working	−4.667	1.389	−0.266	−3.361	**0.001***	−0.742	3.263	−0.042	−0.227	0.82
	Income status-income>expense	5.520	1.879	0.235	2.938	**0.001***	1.144	2.324	0.049	0.492	0.623
	Income status-income<expense	−4.800	1.386	−0.274	−3.464	**0.001***	−2.623	1.599	−0.15	−1.64	0.103
	Educational status-university and higher	9.675	2.434	0.311	3.976	**0.001***	6.509	2.85	0.209	2.284	**0.024****

Note: $F = 5.217$, $R = 0.392$, $R^2 = 0.153$, $P < 0.05$. Bold values are the significant values. * $P < 0.01$; ** $P < 0.05$.

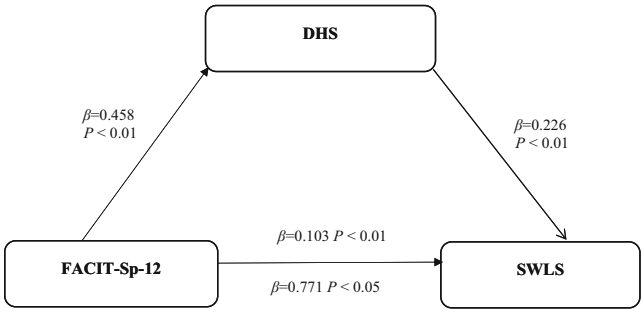

Figure 1 Research model.

religious and spiritual orientations.[8] Spirituality in older individuals can also affect successful ageing, the skills to cope with serious diseases and injuries and the outcome of the disease.[14]

The state of having an additional chronic disease affected spiritual wellbeing negatively in our study. In this context, it can be said that having a chronic disease decreases spiritual wellbeing. In one study, it was observed that the presence of more than one chronic disease in elderly individuals negatively affected their spiritual wellbeing.[42] Kavak *et al*. conducted a study on gastrointestinal cancer patients and concluded that having an additional chronic disease negatively affected spiritual wellbeing.[9] Our results were found to be in line with the literature. Although religious beliefs are usually a source of support for individuals who have a serious disease, some researchers have reported a relationship between religious beliefs and negative health consequences. For example, negative religious coping (that is, feeling left or punished by God, spiritual discontent) has been found to be correlated with increased anxiety, depression and risk of low quality of life.[37] The results indicate that increase in additional chronic diseases as a result of ageing creates spiritual distress in individuals.

It was found that haematologic cancer patients aged 65 and older in our study had moderate levels of life satisfaction. Fonseca *et al*. found that patients with breast cancer had high life satisfaction. In this sense, it was stated that patients had good life conditions in general and they considered their lives were close to ideal.[43] Similarly, Hamdan-Mansour *et al*. found that cancer patients had high satisfaction with life and older patients had higher satisfaction with life.[25] In studies conducted with elderly individuals in the literature, it was observed that the majority of individuals were satisfied with their lives.[44–46] In other studies, it was found that elderly individuals were moderately satisfied with their lives.[47,48] Our results were in parallel with the literature and it was found that cancer patients did not have low levels of satisfaction with life. However, the reason why satisfaction with life was lower than other studies conducted can be both cultural differences and the fact that increased psychological needs of patients were not sufficiently met and the high (50%) number of patients with low level of income.

The present study found that having an educational level of university and higher positively affected satisfaction with life. Similarly, a study conducted showed that high educational level had a positive contribution to quality of life in cancer patients.[49] On the other hand, it was found in another study that education did not affect life satisfaction.[37] In other studies conducted on the elderly, it has been observed that individuals with higher levels of education report higher levels of life satisfaction,[50] and that higher levels of education contribute to healthy ageing.[51] We have both similar and different results from the literature. The reason for this can be the differences in sample groups.

It was found that haematologic cancer patients aged 65 and older in our study had moderate levels of hope. In the studies conducted in the literature, the hope level of the elderly was found to be moderate.[52] Similarly, level of hope was moderate in some of the studies conducted with cancer patients[53,54] In

Table 6 Direct and indirect effects of FACIT-Sp-12 and DHS on SWLS

Variables	Direct effect	Indirect effect	Total effect	LLCI	ULCI	*t*	*P*	R^2
FACIT-Sp-12 → DHS	0.458			0.2892	0.6277	5.3519	**0.001***	**16.2**
DHS → SWLS	0.226			0.0859	0.3667	3.1852	**0.001***	**40.8**
FACIT-Sp-12 → SWLS	0.668	0.103	0.771	0.6209	0.9224	10.1155	**0.001***	**44.7**

Note: Bold values are the significant value. Abbreviations: DHS, Dispositional Hope Scale; FACIT-Sp-12, Spiritual Well-being Scale; LLCI, lower limit confidence interval; SWLS, Satisfaction with Life Scale; ULCI, upper limit confidence interval. *$P < 0.01$.

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a large number of studies on cancer patients, patients were found to have stable and relatively high hope levels during the course of the disease[17,55–58] Hope is a positive psychological source that helps patients in adjusting to cancer, maintaining and improving their wellbeing and life quality.[15] Hope was found to increase the feeling of wellbeing, promote positive thoughts about the diagnosis and give a reason to live in patients with cancer.[59] Our study results were found to be consistent with some of the studies conducted and it was found that cancer patients did not have low levels of hope in general. As can be seen, cancer can affect hope levels of individuals in various ways whatever their culture, belief or country. Based on these results, the fact that our sample consisted of individuals aged 65 and older and most of these had another chronic disease, may have caused them to have moderate levels of hope.

Our study showed that being illiterate negatively affected hope levels. In this context, it can be said that levels of hope increased as participants' educational status increased. In some of the studies conducted, it was found that levels of hope increased as educational status increased, in parallel with our results.[18,60,61] In addition, in a study conducted with elderly individuals, it was reported that the level of hope increased as the level of education increased.[62] On the other hand, it was found in some studies that level of education was not correlated with hope.[17,26,53,63] In another study conducted, level of hope was found to decrease as educational status increased. In a study conducted with elderly individuals, it was found that the perceptions of hopelessness among illiterates and university graduates were higher than those of primary school graduates.[45] We have results both similar to and different from the literature. Based on this result, it can be said that having a high level of education, learning about coping behaviours and reading studies and articles about the disease may have helped individuals with high levels of education to get rid of the feeling of hopelessness.

In our study, spiritual wellbeing positively affected life satisfaction and the mediating role of hope strengthened this positive effect. Similarly, studies in the literature have found that spiritual wellbeing positively affects life quality.[19,37,38,64] Schultz *et al*. found that spirituality encouraged calmness and general wellbeing and made pain and suffering easier.[23] Delgado-Guay *et al*. found that spirituality and religiousness were helpful in coping with cancer and they were a source of strength and comfort in almost all of their participants (99%) and these patients stated that spiritual religious coping positively affected their lives.[65] Özdemir *et al*. reported there was a positive correlation between hope, spiritual wellbeing, and life satisfaction in elderly individuals. They also suggested that supporting individuals in terms of these three parameters could contribute to quality ageing.[27] The results of the same study showed that spiritual pain negatively affected physical emotional symptoms of patients and could result in higher depression, anxiety, anorexia and sleeping state.[65] Hope consists of thoughts (for example, 'I can do this!') that provide motivation to pursue goals even when obstacles are encountered. Hope is very important in coping with cancer.[66] A positive association between hope and quality of life and spiritual wellbeing was reported in a review of 33 studies conducted on patients receiving cancer treatment.[67] Hope means a feeling of assurance and belief that things will develop in a positive way and it is usually associated with optimistic perspectives.[68] Hope is fuelled by spirituality, and can promote compliance for cancer patients in terms of survival, considering its role in promoting positive perceptions.[69] Women with breast cancer who reported higher spirituality were found to be more hopeful and have a higher perceived quality of life in one study.[70] In preventing quality of life from deteriorating, hope plays an important role as a psychological and spiritual resource useful in fighting cancer. Psychological wellbeing, physical wellbeing and quality of life are positively influenced by hope.[71] Studies conducted with cancer patients reported spirituality as a positive predictor of life quality and this effect was found to increase through hope, similar to the results of our study.[19] The results showed that spiritual wellbeing and hope were effective factors in compliance with cancer and life satisfaction in our study. In addition, spirituality may make individuals more optimistic and increase their life quality.

LIMITATIONS

The study has two limitations. First, the results cannot be generalised, and they only apply to the

patients in the study. Second, data reliability is limited by the accuracy of the patients' answers.

CONCLUSION

It was found that haematologic cancer patients aged 65 and older in our study had high levels of spiritual wellbeing and moderate levels of life satisfaction and hope. In our study, it was found that being illiterate negatively affected the level of hope, while the state of having another chronic disease negatively affected spiritual wellbeing and having a university degree or a higher degree positively affected life satisfaction. Life satisfaction was found to be positively affected by spiritual wellbeing, and the positive effect was found to increase with the mediating role of hope. In nursing care, it is recommended to regularly evaluate spiritual wellbeing, hope and life satisfaction in older individuals, to organise nursing interventions to increase hope and life satisfaction and to conduct the study with different sample groups.

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DISCLOSURE

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DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

REFERENCES

1 Estape T. Cancer in the elderly: challenges and barriers. *Asia Pac J Oncol Nurs* 2018; **5**: 40–42.
2 Başol RÖ. Türkiye ve AB Ülkelerinde Yaşlı Nüfusun Görünümü. *Kocaeli Univ Soc Sci J* 2019; **37**: 35–46.
3 Gu YF, Lin FP, Epstein RJ. How aging of the global population is changing oncology. *Ecancermedicalscience* 2021; **15**: 15.
4 World Health Organization (WHO). Global Health Estimates 2020: Deaths by Cause, Age, Sex, by Country and by Region, 2000–2019. 17.10.202 220 20. Available from URL: http://www.who.int./data/gho/data/themes/mortality-and-global-health-estimates/ghe-leading-causes-of-death.
5 Sung H, Ferlay J, Siegel RL *et al*. Global cancer statistics 2020: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA Cancer J Clin* 2021; **71**: 209–249.
6 Howlader N, Noone A, Krapcho M *et al*. SEER cancer statistics review, 1975–2014, National Cancer Institute 2017. 2018.
7 Krok-Schoen JL, Fisher JL, Stephens JA *et al*. Incidence and survival of hematological cancers among adults ages≥75 years. *Cancer Med* 2018; **7**: 3425–3433.
8 Gürsu O, Ay Y. Din, manevi iyi oluş ve yaşlılık. *J Int Soc Res* 2018; **11**: 1176–1190.
9 Kavak F, Özdemir A, Dural G. The relation between spiritual wellbeing and psychological resilience among patients diagnosed with advanced gastrointestinal cancer. *Curr Psychol* 2021; **40**: 1788–1794.
10 Jimenez-Fonseca P, Lorenzo-Seva U, Ferrando PJ *et al*. The mediating role of spirituality (meaning, peace, faith) between psychological distress and mental adjustment in cancer patients. *Support Care Cancer* 2018; **26**: 1411–1418.
11 Uwland-Sikkema NF, Visser A, Westerhof GJ, Garssen B. How is spirituality part of people's meaning system? *Psychol Relig Spiritual* 2018; **10**: 157–165.
12 Koenig HG. Religion, spirituality, and health: the research and clinical implications. *Int Schol Res Not* 2012; **2012**: 1–33.
13 Hamilton JB. Emotional Suffering and the Use of Spirituality as a Resource among African American Cancer Survivors, *J Cancer Education* 2019; **34**:409–411.
14 Balducci L. Geriatric oncology, spirituality, and palliative care. *J Pain Symptom Manag* 2019; **57**: 171–175.
15 Seiler A, Jenewein J. Resilience in cancer patients. *Front Psych* 2019; **10**: 208.
16 Torabi F, Rassouli M, Nourian M, Borumandnia N, Shirinabadi Farahani A, Nikseresht F. The effect of spiritual care on adolescents coping with cancer. *Holist Nurs Pract* 2018; **32**: 149–159.
17 Kavradim ST, Özer ZC, Bozcuk H. Hope in people with cancer: a multivariate analysis from Turkey. *J Adv Nurs* 2013; **69**: 1183–1196.
18 Cao W, Qi X, Yao T, Han X, Feng X. How doctors communicate the initial diagnosis of cancer matters: cancer disclosure and its relationship with Patients' hope and trust. *Psycho-Oncology* 2017; **26**: 640–648.
19 Jafari E, Najafi M, Sohrabi F, Dehshiri GR, Soleymani E, Heshmati R. Life satisfaction, spirituality well-being and hope in cancer patients. *Procedia Soc Behav Sci* 2010; **5**: 1362–1366.
20 Esfandiyar B, Javad K, Elham A, Neda A. Relationship between spiritual well-being, religion, and hope among patients with cancer. *HAYAT J Fac Nurs Midwifery* 2011; **17**: 27–37.
21 Afshar M, Sadat Z, Bagheri M. The effect of spiritual counseling on Hope in patients with multiple sclerosis: a randomized clinical trial. *Int J Community Based Nurs Midwifery* 2021; **9**: 313–324.
22 Akbari S, Pazokian M, Farahani ASA, Nasiri M, Rajab A. Investigating the effect of spiritual care on the hope of diabetic patients referred to the Iranian diabetes association: a clinical trial. *Arch Pharm Pract* 2020; **11**: 124–130.

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23 Schultz M, Baddarni K, Bar-Sela G. Reflections on palliative care from the Jewish and Islamic tradition. *Evid Based Complement Alternat Med* 2012; **2012**: 1–8.
24 Hassan M, Abedi-Valugerdi M. Hematologic malignancies in elderly patients. *Haematologica* 2014; **99**: 1124–1127.
25 Hamdan-Mansour AM, Al Abeiat DD, Alzoghaibi IN, Ghannam BM, Hanouneh SI. Psychosocial and sociodemographic correlates of life satisfaction among patients diagnosed with cancer in Jordan. *J Cancer Educ* 2015; **30**: 31–36.
26 Rustøen T, Wahl AK, Hanestad BR, Lerdal A, Miaskowski C, Moum T. Hope in the general Norwegian population, measured using the Herth Hope index. *Palliat Support Care* 2003; **1**: 309–318.
27 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**: 3123–3136.
28 Zhang N, Wu J, Wang Q *et al*. Global burden of hematologic malignancies and evolution patterns over the past 30 years. *Blood Cancer J* 2023; **13**: 82.
29 Çapık C. İstatistiksel güç analizi ve hemşirelik araştirmalarinda kullanimi: temel bilgiler. *Anadolu Hemş Sağ Bil Derg* 2014; **17**: 268–274.
30 Snyder CR, Harris C, Anderson JR *et al*. The will and the ways: development and validation of an individual-differences measure of hope. *J Pers Soc Psychol* 1991; **60**: 570–585.
31 Tarhan S, Bacanlı H. Sürekli Umut Ölçeği'nin Türkçe'ye uyarlanması: Geçerlik ve güvenirlik çalışması. *J Happiness Well-Being* 2015; **3**: 1–14.
32 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.
33 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**: 684–692.
34 Diener E, Emmons RA, Larsen RJ, Griffin S. The satisfaction with life scale. *J Pers Assess* 1985; **49**: 71–75.
35 Dağlı A, Baysal N. Yaşam doyumu ölçeğinin türkçe'ye uyarlanmasi: geçerlik ve güvenirlik çalişmasi. *Elektron Sos Bil Derg* 2016; **15**: 1250–1262.
36 Erdogan TK, Koç Z. Loneliness, death perception, and spiritual well-being in adult oncology patients. *Cancer Nurs* 2021; **44**: E503–E512.
37 Chaar EA, Hallit S, Hajj A *et al*. Evaluating the impact of spirituality on the quality of life, anxiety, and depression among patients with cancer: an observational transversal study. *Support Care Cancer* 2018; **26**: 2581–2590.
38 Al-Natour A, Al Momani SM, Qandil A. The relationship between spirituality and quality of life of Jordanian women diagnosed with breast cancer. *J Relig Health* 2017; **56**: 2096–2108.
39 Cheng Q, Liu X, Li X, Wang Y, Mao T, Chen Y. Improving spiritual well-being among cancer patients: implications for clinical care. *Support Care Cancer* 2019; **27**: 3403–3409.
40 Sajadi M, Niazi N, Khosravi S, Yaghobi A, Rezaei M, Koenig HG. Effect of spiritual counseling on spiritual well-being in Iranian women with cancer: a randomized clinical trial. *Complement Ther Clin Pract* 2018; **30**: 79–84.
41 Amirmohamadi M, Borhani F, Kiani M, Almasi-Hashiani A, Naghavi B. The correlation between spiritual wellbeing and depression in elderly patients with cancer in Iran. *Middle East J Fam Med* 2017; **7**: 9.
42 Rocha ACAL, Ciosak SI. Chronic disease in the elderly: spirituality and coping. *Rev Esc Enferm USP* 2014; **48**: 87–93.
43 Fonseca S, Lencastre L, Guerra M. Life satisfaction in women with breast cancer. *Paidéia (Ribeirão Preto)* 2014; **24**: 295–303.
44 Erci B, Çoban M, Yıldırım H. Altmış Beş Yaş ve Üzeri Bireylerde Yaşam Memnuniyeti Durumu ve Etkileyen Faktörler. *Turk Klin J Nurs Sci* 2017; **9**: 193–200.
45 Erci B, Yilmaz D, Budak F. Effect of self-care ability and life satisfaction on the levels of Hope in elderly people. *J Psychiatr Nurs/Psikiyatri Hemş Der* 2017; **8**: 72–76.
46 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**: 1–10.
47 Chehregosha M, Bastaminia A, Vahidian F *et al*. Life satisfaction index among elderly people residing in Gorgan and its correlation with certain demographic factors in 2013. *Global J Health Sci* 2016; **8**: 41.
48 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.
49 Stephens C, Stein K, Landrine H. The role of acculturation in life satisfaction among Hispanic cancer survivors: results of the American Cancer Society's study of cancer survivors. *Psycho-Oncology* 2010; **19**: 376–383.
50 Amaike B. Education as a correlate of life satisfaction among formal sector retirees in Lagos state, Nigeria. *Afr Popul Stud* 2014; **27**: 434–445.
51 Meeks S, Murrell SA. Contribution of education to health and life satisfaction in older adults mediated by negative affect. *J Aging Health* 2001; **13**: 92–119.
52 Abraham S. *Effects of Hope Intervention on Hope and Quality of Life in Senior People Who Live Alone*: Doctoral dissertation, Andrews University, 2023.
53 Vellone E, Rega ML, Galletti C, Cohen MZ. Hope and related variables in Italian cancer patients. *Cancer Nurs* 2006; **29**: 356–366.
54 Stanton AL, Danoff-burg S, Huggins ME. The first year after breast cancer diagnosis: hope and coping strategies as predictors of adjustment. *Psycho-Oncol* 2002; **11**: 93–102.
55 Aslan Ö, Sekmen K, Kömürcü Ş, Özet A. Hope in cancer patients. *J Nurs Coll* 2007; **11**: 18–24.
56 Felder BE. Hope and coping in patients with cancer diagnoses. *Cancer Nurs* 2004; **27**: 320–324.
57 Rustøen T, Cooper BA, Miaskowski C. The importance of hope as a mediator of psychological distress and life satisfaction in a community sample of cancer patients. *Cancer Nurs* 2010; **33**: 258–267.
58 Utne I, Miaskowski C, Bjordal K, Paul SM, Jakobsen G, Rustøen T. The relationship between hope and pain in a sample of hospitalized oncology patients. *Palliat Support Care* 2008; **6**: 327–334.
59 Saleh US, Brockopp DY. Hope among patients with cancer hospitalized for bone marrow transplantation: a phenomenologic study. *Cancer Nurs* 2001; **24**: 308–314.
60 Herth K. Abbreviated instrument to measure hope: development and psychometric evaluation. *J Adv Nurs* 1992; **17**: 1251–1259.
61 Ozen B, Ceyhan O, Büyükcelik A. Hope and perspective on death in patients with cancer. *Death Stud* 2020; **44**: 412–418.
62 Savari H, Roohi G, Sabzi Z, Mehravar F. The association between the perception of aging and Hope in older people of Gorgan, Iran. *Epidemiol Health Syst J* 2023; **10**: 126–130.

63 Khater WA, Alkwiese MJ. Predictors of hope among patients with cancer in Jordan. *J Hosp Palliat Nurs* 2013; **15**: 471–478.
64 Jafari N, Farajzadegan Z, Zamani A, Bahrami F, Emami H, Loghmani A. Spiritual well-being and quality of life in Iranian women with breast cancer undergoing radiation therapy. *Support Care Cancer* 2013; **21**: 1219–1225.
65 Delgado-Guay MO, Hui D, Parsons HA *et al*. Spirituality, religiosity, and spiritual pain in advanced cancer patients. *J Pain Symptom Manag* 2011; **41**: 986–994.
66 Feldman DB, Corn BW. Hope and cancer. *Curr Opin Psychol* 2022; **49**: 101506.
67 Nierop-van Baalen C, Grypdonck M, Van Hecke A, Verhaeghe S. Associated factors of hope in cancer patients during treatment: a systematic literature review. *J Adv Nurs* 2020; **76**: 1520–1537.
68 Afrooz R, Rahmani A, Zamanzadeh V *et al*. The nature of hope among Iranian cancer patients. *Asian Pac J Cancer Prev* 2014; **15**: 9307–9312.
69 Sharif Nia H, Lehto RH, Seyedfatemi N, Mohammadinezhad M. A path analysis model of spiritual well-being and quality of life in Iranian cancer patients: a mediating role of hope. *Support Care Cancer* 2021; **29**: 6013–6019.
70 Sharif SP, Lehto RH, Amiri M *et al*. Spirituality and quality of life in women with breast cancer: the role of hope and educational attainment. *Palliat Support Care* 2021; **19**: 55–61.
71 Farhadi M, Reisi-Dehkordi N, Kalantari M, Zargham-Boroujeni A. Efficacy of group meaning centered hope therapy of cancer patients and their families on patients' quality of life. *Iran J Nurs Midwifery Res* 2014; **19**: 290–294.