

Effects of Sociodemographic Characteristics, Illness Process, and Social Support on the Levels of Perceived Quality of Life in Veterans

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Quality of life is a broad, complex, multidimensional concept incorporating psychological, sociopsychological, economic, philosophical, social, cultural, and spiritual dimensions. As accompanying or even constituting the concept of quality of life, social support (empathic, informational, instrumental, and reassurance support) has not been studied. This study sought to determine the effects of sociodemographic characteristics, illness process, and type of social support on the quality of life levels of veterans hospitalized in a rehabilitation center. Seventy-nine veterans were involved in the study. None of the sociodemographic characteristics of the veterans correlated with the quality of life of the veterans except housing conditions. The perceived quality of life scores of the veterans who needed psychological help were lower than those of their counterparts ($p < 0.01$). The quality of life scores of the veterans were not different from those of the average Turkish population, but veterans who had not received any type of social support had lower quality of life scores (3.74 vs. 4.70). Veterans who had empathic, informational, and reassurance social support had higher quality of life scores than did those who did not have these types of social support. Having tangible social support did not change the quality of life scores. Our findings indicate that social support has a greater impact on the perceived quality of life than sociodemographic and medical factors among the veterans.

Introduction

There is growing interest in quality of life in the medical context, where quality of life measures have come to play an increasing role in health needs assessments and evaluation of health outcomes. However, quality of life is a broad, complex, multidimensional concept incorporating psychological, sociopsychological, economic, philosophical, social, cultural, and spiritual dimensions. Therefore, it is not surprising to find considerable controversy surrounding its definition and measurement.¹

Most misunderstandings and difficulties with quality of life studies in medicine arise from uncertainty about which aspect of the concept is being considered; this includes the objective aspect of everyday life (ranging from health status, including functional capabilities, to material considerations, social functioning, and environment), the subjective aspect, a nonspecific perception of all aspects of individual existence (the person's own inner experience, subjective well-being, life satisfaction, or happiness), or both.²⁻⁶ Although there is no universal opera-

tional definition of the perceived quality of life, all aspects of it are related to the physical, psychological, economic, spiritual, and social well-being of the person.⁷⁻¹⁰ Within this context, we must remember the World Health Organization definition of health, which is "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."¹¹ The value of mental and social health, as much as physical health, of people becomes most important.¹²

Although the concept of quality of life is complex, the importance of the patient's perceived health status has gained increased recognition in the treatment of disease and disease outcomes. In the past decade, more studies have been performed on the quality of life of different patients (e.g., patients with migraine,¹³ cancer,^{14,15} lung diseases,^{16,17} asthma,¹⁸ or human immunodeficiency virus/acquired immunodeficiency syndrome^{19,20}). Studies in this area have traditionally focused on health-related quality of life. Furthermore, as accompanying and/or even constituting the concept of quality of life, social support (empathic, informational, instrumental, and reassurance support) has not been studied with veterans in Turkey.

Social Support and Effects of Social Support on Quality of Life

In the past two decades, research findings have consistently indicated that social support has valuable effects on people's health and may act as an appropriate buffer against psychological distress induced by illness.²¹⁻²⁹ Social support can be defined as the existence or availability of people who care about an individual and on whom the individual can rely when needed. A large body of literature has discussed the concept of social support. Most empirical studies differ extensively in how they assess social support. Some alarming situations may be better disentangled with tangible/formal aids (loans or material help), whereas others may be better resolved by intangible/informal events (sympathy, affection, listening, or advice). Social support may also refer to the perception of a sufficient number of individuals on whom to rely (transactions) and the degree of satisfaction with the available and provided support. Finally, distinguishing between daily support vs. crisis- and problem-oriented support may be relevant. When speaking about social support, basic distinctions include tangible vs. intangible support, number of transactions vs. satisfaction with those transactions, and daily vs. problem-oriented support. Schaefer et al.³⁰ stressed the importance of developing measures that enable researchers to distinguish the multiple facets of social support.

Theories of social support traditionally encompass the functions that buffer stress and promote psychological well-being,

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namely, empathic, informational, instrumental, and reassurance support. Perceptions of interpersonal relationships and social support have been related to quality of life.³¹⁻³³ Social support may play a beneficial role in the determination of quality of life in veterans, notably with regard to mental dimensions.

The present study sought to determine the differential effects of sociodemographic characteristics, illness process, and type of social support on the quality of life of veterans hospitalized in a rehabilitation center. Independent and dependent variables used in the study are given in Table I. The research questions were as follows. (1) Are quality of life levels for the veterans related to their sociodemographic characteristics? (2) Are quality of life levels for the veterans related to differences in illness processes? (3) Are quality of life levels for the veterans related to the type of social support?

Methods

Setting

Gülhane Military Medical Academy Rehabilitation and Health Care Center was established to provide rehabilitation and life-long care for veterans and other persons with disabilities in Turkey. The rehabilitation team consists of a physical medicine and rehabilitation physician, physiotherapist, social worker, rehabilitation nurse, prosthetist and orthotist, psychologist, occupational therapist, and speech therapist. The aim of the center is to reduce dependency by improving capabilities and to reintegrate the veterans into the community.

Participants

The target population of the present study came from hospitalized veterans in the Gülhane Military Medical Academy Rehabilitation and Health Care Center. The sample included 79 male respondents. This cross-sectional study was conducted in the amputee unit, spinal cord injury unit, and nursing home of the Gülhane Military Medical Academy Rehabilitation and Health Care Center.

All of the veterans were male, 21 to 34 years of age (mean, 27.09 years; SD, 3.66 years), with spinal cord injuries ($n = 20$; 25.3%), orthopedic injuries (amputation, calcaneal injuries, or

nerve lesions) ($n = 54$; 68.4%), brain injuries ($n = 2$; 2.5%), or total blindness ($n = 3$; 3.8%). Most of the veterans were single but living with their parents and came from nuclear families. They had low levels of education (mainly primary education, i.e., 5 years). Their monthly income was approximately \$500, and all of them were under the social security system. Most of them had also been employed in public companies, which means that they had additional income and their family income was relatively higher than that of ordinary employees in the Turkish population. Two-thirds of the patients were living in their own houses but their housing conditions were insufficient for their disabilities.

Instruments

Data were collected by using two instruments, a quality of life instrument and a questionnaire developed for study purposes. The quality of life instrument is a Likert-type, self-administered scale that has 24 items, including living situation, finances, leisure, family relations, social life, health, and access to health care. Respondents were asked to indicate whether each item described how they had been thinking for the past 6 months. Responses were scored from 1 to 7, with 7 corresponding to a more-optimistic response. Higher scores indicate greater levels of quality of life. The quality of life instrument has good internal consistency and test-retest reliability, and concurrent validity has been established.³⁴ The validity and reliability of this inventory for Turkish society were studied by Simsek,³⁵ and Cronbach's α value was found to be 0.93. In our study, this value was 0.83.

The study questionnaire for veterans consisted of three subgroup questions related to (1) social and demographic characteristics such as age, marital status, family type, education, family income, and housing conditions; (2) illness process (e.g., length of the illness and number of hospitalizations); and (3) social support (e.g., having emotional/empathic social support). A pretest was performed with 12 patients, to determine whether the questions to be used in the research were easily understood. It was determined that the questions were clear, manifest, and easily answerable for veterans. The results obtained indicated that the means of data collection in the research were both valid and reliable and could be applied to the veterans.

Data Analyses

The data were analyzed by using the SPSS statistical package, version 11.5 (SPSS, Chicago, Illinois). Quality of life scores were used as the dependent variable. Social and demographic characteristics, illness process, and social support were used as independent variables. According to the type of variables, proportions, SDs, means, and Student's t test, Pearson correlation r test, and analysis of variance statistics were used in descriptions and research questions. The minimal acceptable level of significance was set at 0.05.

Results

The results of the analyses of the data gathered in the present study are organized as follows. The first part is related to the effects of social and demographic characteristics on the levels of quality of life. The second part is about the illness process and its effects on the level of quality of life. The third part is related to the effects of having social support on the level of quality of life of the veterans.

TABLE I

INDEPENDENT AND DEPENDENT VARIABLES USED IN THE STUDY

Independent Variables	Dependent Variable
Sociodemographic characteristics	Perceived quality of life
Age	
Marital status	
Family type	
Education	
Family income	
Housing conditions	
Illness process	
Length of illness	
Number of hospitalizations	
Social support	
Empathic	
Informational	
Tangible	
Reassurance	

TABLE II

RELATIONSHIPS BETWEEN SOCIODEMOGRAPHIC CHARACTERISTICS AND THE LEVEL OF QUALITY OF LIFE

Variables	No.	Quality of Life Score		Statistics
		Mean	SD	
Social insurance				
No	10	4.48	0.75	$t = -0.652$
Yes	69	4.63	0.69	
Employment status				
Not employed	28	4.50	0.64	$t = -1.078$
Employed	51	4.68	0.72	
Family type				
Nuclear	58	4.59	0.66	$F = 0.732$
Extended	17	4.61	0.83	
Living alone	4	5.02	0.53	
Marital status				
Married	34	4.44	0.70	$t = -1.761$
Single	45	4.72	0.66	
Housing conditions				
Suitable for their disability	35	4.83	0.65	$t = 2.496^a$
Not suitable for their disability	44	4.45	0.69	
Monthly income	79			$r = 0.101$
Age	79			$r = -0.149$
Education	79			$r = 0.106$

^a $p < 0.01$.

The first question focused on the relationships between the differences in the sociodemographic characteristics of the veterans and the level of quality of life (Table II). As can be seen in Table II, there was a positive correlation between the veterans' monthly income and education levels and the level of quality of life. However, this correlation was not statistically significant, in terms of both monthly income ($r = 0.101$; $p > 0.05$) and education level ($r = 0.106$; $p > 0.05$). Table II reveals that there was a negative correlation between the veterans' age, employment status, and marital status. However, this correlation was not statistically significant ($p > 0.05$). In addition, although the mean score of quality of life for the veterans who lived alone was slightly higher than those for veterans who lived within an extended or nuclear family, the difference in quality of life between them was not significant [$F = 0.732(2)$; $p > 0.05$]. Finally, the quality of life level of the veterans living in suitable housing conditions for their disabilities was found to be much higher than that of their counterparts; the quality of life average for the former was 4.83 and that of their counterparts was 4.45, and this difference was statistically significant [$t = 2.496(77)$; $p < 0.01$].

The second question focused on the relationships between the illness process and the level of quality of life of the veterans (Table III). As can be seen in Table III, quality of life scores of the veterans positively correlated with both the number of hospitalizations and the length of stay. However, neither the number of hospitalizations ($r = 0.034$; $p > 0.05$) nor the length of stay ($r = 0.072$; $p > 0.05$) affected the quality of life significantly. In addition, although the quality of life average for the veterans with orthopedic injuries was slightly higher than that for the veterans with spinal cord injuries, the difference in quality of life

TABLE III

RELATIONSHIPS BETWEEN ILLNESS PROCESS AND THE LEVEL OF QUALITY OF LIFE

Variables	No. (%)	Quality of Life Score		Statistics
		Mean	SD	
Number of hospitalizations (range, 1-20)	79	3.16	3.23	$r = 0.034$
Length of hospitalization (range, <1 month to 26 months)	79	5.48	6.39	$r = 0.072$
Type of illness				
Spinal cord injuries	20 (25.3)	4.56	0.66	$t = -0.348$
Orthopedic injuries (amputation, calcaneal injuries, or nerve lesions)	54 (68.4)	4.63	0.71	
Additional illness				
Yes	17 (21.79)	4.56	0.66	$t = -0.348$
No	62 (78.21)	4.63	0.71	
Having psychosocial treatment				
Yes	34 (43.04)	4.29	0.53	$t = -3.860^a$
No	45 (56.96)	4.85	0.71	

^a $p < 0.001$.

between them was not significant [$t = -0.348(72)$; $p > 0.05$]. However, the perceived quality of life scores for the veterans who needed psychological help were lower than those for their counterparts. The difference in the quality of life between the two groups was found to be significant [$t = -3.860(77)$; $p < 0.01$].

The last question examined the relationship between the type of social support and the level of quality of life (Table IV). It is not surprising that our study indicated that the veterans who had no type of social support had lower levels of quality of life (scores of 3.74 vs. 4.70). As Table IV indicates, approximately one of every 10 veterans did not have any social support. The difference in the quality of life between these veterans and those who had some social support was statistically significant [$t = -3.754(77)$; $p < 0.001$]. In addition, veterans with empathic [4.75 vs. 3.99; $t = -4.027(77)$; $p < 0.001$], informational [4.77 vs. 4.40; $t = -2.413(77)$; $p < 0.05$], and reassurance [4.72 vs. 4.29; $t = -2.496(77)$; $p > 0.01$] social support had higher quality of life scores than did those who did not have these types of social support. The mean quality of life scores of the veterans with and without instrumental social support were almost the same (4.62 vs. 4.61), and instrumental social support did not have any significant effect on the quality of life of the veterans [$t = 0.029(77)$; $p > 0.05$].

Discussion

There are a number of studies on the influence of socioeconomic and other factors on the quality of life. Our results indicated that there were differences in the quality of life of the

TABLE IV
RELATIONSHIPS BETWEEN TYPES OF SOCIAL SUPPORT AND THE
LEVEL OF QUALITY OF LIFE

Type of Social Support	No.	Quality of Life Score		Statistics
		Mean	SD	
No social support				
No	7	3.74	0.71	$t = -3.754^a$
Yes	72	4.70	0.64	
Empathic social support				
No	14	3.99	0.65	$t = -4.027^a$
Yes	65	4.75	0.63	
Informational social support				
No	34	4.40	0.75	$t = -2.413^b$
Yes	45	4.77	0.61	
Tangible social support				
No	40	4.62	0.79	$t = 0.029$
Yes	39	4.61	0.58	
Reassurance social support				
No	20	4.29	0.76	$t = -2.496^c$
Yes	59	4.72	0.64	

^a $p < 0.001$.

^b $p < 0.05$.

^c $p < 0.01$.

veterans included in this study. The mean quality of life score of the veterans was relatively higher than those in other studies.^{17,35} Factors such as having considerably greater governmental social support, proper income, and easy access to health services might have contributed to the veterans' higher quality of life scores. In comparison with the average Turkish population, having better financial and employment status and being under the social security system might result in higher quality of life. Additionally, all of the participants except four were living with their families, which shows that there exists accessible family social support for veterans in Turkish society.

As indicated in the first question, we aimed to explore the relationship between sociodemographic characteristics of the veterans (e.g., age, marital status, education, monthly income, social insurance, employment, family type, and housing conditions) and quality of life. Sociodemographic characteristics of the veterans such as income, being younger, having more education, being employed, living alone and not being married, and having insurance did not differ for the perceived quality of life scores. The findings of other studies correlated with our results.³⁵⁻³⁹ As indicated previously, there was no relationship between age and quality of life. This result correlates with the results of some studies^{34,40} but not the results of other studies.^{36,41-45} The relationships between marital status and the quality of life were not supported, and this result correlates with the findings of Skantze et al.³⁸ and Carpinello et al.⁴⁰ Housing conditions of the veterans and their quality of life correlated significantly. The positive correlation between good housing conditions and the level of quality of life ($p < 0.05$) is not surprising, and inadequacy in housing conditions is not a desirable condition for persons with handicaps.

The second question of our study focused on the relationships between the illness process and the level of quality of life. As shown in Table III, the relationships between the number and length of hospitalizations and the quality of life were not statistically significant ($p > 0.05$), but undergoing psychosocial treatment did great effects on the perceived quality of life of the veterans. As indicated in Table III, veterans who had psychosocial treatment had relatively lower quality of life scores. Our results showed that the number and length of hospitalizations correlated slightly positively with the perceived quality of life of the veterans. The rehabilitation center provides a variety of services, including psychosocial support, recreational and vocational activities, and physical therapy, which might result in higher quality of life scores.

The third question in our study focused on the relationships between social support and perceived quality of life of the veterans. As shown in Table IV, having social support had a greater impact on the quality of life than did sociodemographic and medical factors among the veterans. Social support was highly related to the quality of life, and our results correlated with previous research findings that showed beneficial effects of social support on the well-being of veterans.⁴⁶⁻⁵⁰

Seven veterans had no social support, and their quality of life scores were lower than the others, as expected. It is surprising that having at least one type of social support of any kind increased the quality of life. Additionally, the quality of life scores of the veterans with empathic/emotional social support were considerably higher than those of their counterparts in our study. Empathic support consists of affection, comforting, and encouragement, which have positive effects on self-esteem, feelings of self-worth, and a sense of belonging.⁵¹ Relationships with other people help in establishing and maintaining emotional balance, which enables coping with the illness process. Emotional support also enhances psychological well-being by building hope, optimism, and self-esteem.

Our study indicated that one of three veterans lacked adequate informational social support, which resulted in lower quality of life. In contrast, veterans who had informational social support had higher quality of life scores. Informational support, such as advice or updated knowledge, might help the veterans interpret, comprehend, or cope with the illness. Uncertainties about the illness process can produce a strong need for information. Accurate information can lead to realistic expectations about the course of illness, which may in turn facilitate psychological adjustment and help veterans have positive thoughts about themselves, resulting in high quality of life.

Although tangible social support did not make any difference in the quality of life of the veterans, the materials, assistance, and services have practical functions and constitute an instrumental dimension of support.⁵¹ Practical assistance with daily activities helps to reduce distress and may help to increase veterans' positive attitudes toward themselves. In some circumstances, tangible social support can have greater psychological benefits than either emotional or informational support. The availability of assistance can relieve stress caused by the illness and may result with higher quality of life.

Interpersonal relationships can help to alleviate psychological distress associated with life-threatening situations. Social support promotes cognitive and behavioral coping, facilitates a

sense of meaning, enhances self-esteem, fosters a sense of belonging, and increases available coping resources.⁵² Unfortunately, seven of the veterans had no social supports, and some of them had inadequate social support when it was most needed. Feeling supported is determined by more than mere social contact.^{53,54} Social interactions must address the demands of stressors if they are going to protect against emotional distress.

Understanding the veterans' feelings empathically, supporting them by giving them sufficient information about their situation, and providing them with material help will probably increase their quality of life. To protect, maintain, and develop their quality of life, social support resources for the veterans must be enhanced and must be continuous. Social supports of any kind are very important for veterans' reintegration into their social milieu and being a productive member of the community. Within these circumstances, providing all kinds of social support through rehabilitation hospital-based services or community-based services is very important. Finally, the approaches of health professionals are also important; they must provide services to keep social support available for the veterans.

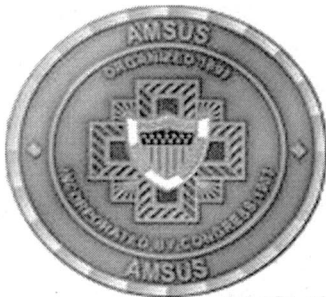
We would like to mention some of the limitations of this study. The cross-sectional method that we used in this study might have some limitations for this research. Another limitation involves the sample. We conducted the study with a small sample size, and we reached only inpatient veterans. The status of veterans who are living in the community and those who never visited the rehabilitation center is unknown to the researchers. Reaching those veterans might yield different results, and this can be the focus of another study. Another limitation is regarding the Turkish military system. The Turkish military system does not include female soldiers; therefore, this study cannot be generalized to female veterans. Finally, the most important limitation is that functional independence measurements were not evaluated in this study.

In conclusion, both suitable housing conditions and social support had greater impact on the quality of life than did socio-demographic and medical factors among the veterans. Finally, veterans wait for understanding and sympathy, rather than material support.

References

- Wiklund I, Gorkin L, Pawitan Y, et al: Methods for assessing quality of life in the Cardiac Arrhythmia Suppression Trial (CAST). *Qual Life Res* 1992; 1: 187-201.
- Lehman AF: The effects of psychiatric symptoms on quality of life assessments among the chronic mentally ill. *Eval Prog Plan* 1983; 6: 143-51.
- Horley J: Life satisfaction, happiness, and morale: two problems with the use of subjective well-being indicators. *Gerontologist* 1984; 24: 124-7.
- Dazord A, Astolfi F, Guisti P, et al: Quality of life assessment in psychiatry: the Subjective Quality of Life Profile (SQLP): first results of a new instrument. *Community Ment Health J* 1998; 34: 525-35.
- Bigelow AB, McFarland BH, Olson MM: Quality of life of community mental health program clients: validating a measure. *Community Ment Health J* 1991; 27: 43-56.
- Wong E, Cronin L, Griffith L, Irvine EJ, Guyatt GH: Problems of HRQL assessment: how much is too much? *J Clin Epidemiol* 2001; 54: 1081-5.
- Brockner J: *Self-Esteem at Work*. Lexington, MA, Lexington Books, 1988.
- Brockner J, Guare J: Improving the performance of low self-esteem individuals: an attributional approach. *Acad Manage J* 1983; 26: 642-56.
- Headley BW, Kelley J, Wearing AJ: Dimensions of mental health: life satisfaction, positive affect, anxiety and depression. *Soc Indicat Res* 1993; 29: 63-82.
- Stegrist J, Junge A: Conceptual and methodological problems in research on the quality of life in clinical medicine. *Soc Sci Med* 1989; 29: 463-8.
- World Health Organization: *Basic Documents*. Geneva, Switzerland, World Health Organization, 1948.
- Sherbourne CD, Sturm R, Wells K: What outcomes matter to patients? *J Gen Intern Med* 1999; 14: 357-63.
- Terwindt GM, Ferrari MD, Tjhuis M, Groenen SM, Picavet HS, Launer LJ: The impact of migraine on quality of life in the general population: the GEM Study. *Neurology* 2000; 55: 624-9.
- DaSilva FC: Quality of life in prostate cancer patients. *Cancer* 1993; 72: 3803-6.
- Butler L, Downe-Wamboldt B, Marsh S, Bell D, Jarvi K: Quality of life post radical prostatectomy: a male perspective. *Urol Nurs* 2001; 21: 283-8.
- Viramontes JL, O'Brien B: Relationship between symptoms and health-related quality of life in chronic lung diseases. *J Gen Intern Med* 1994; 9: 46-8.
- Duyan V, Kurt B, Aktas Z, Duyan GC, Kulkul DO: Relationship between quality of life and characteristics of patients hospitalized with tuberculosis. *Int J Tuberc Lung Dis* 2005; 9: 1361-6.
- Juniper E, Guyatt GH, Ferri PJ, Griffith LE: Measuring quality of life in asthma. *Am Rev Respir Dis* 1993; 147: 468-79.
- Caron J, Fowler FJ, Weissman J, et al: Health-related quality of life in persons with acquired immune deficiency syndrome. *Med Care* 1993; 31: 569-80.
- Eller LS: Quality of life in persons living with HIV. *Clin Nurs Res* 2001; 10: 401-23.
- Sarason IG, Levine HM, Basham RB, Sarason BR: Assessing social support: the Social Support Questionnaire. *J Pers Soc Psychol* 1983; 44: 127-39.
- Achat H, Kawachi I, Levine S, Berkey C, Coakley E, Colditz G: Social networks, stress and health-related quality of life. *Qual Life Res* 1998; 7: 735-50.
- Caron J, Tempier R, Mercier C, Leouffe P: Components of social support and quality of life in severely mentally ill, low income individuals and a general population group. *Community Mental Health J* 1998; 34: 459-75.
- Pinquart M, Sorensen S: Influences of socioeconomic status, social network, and competence on subjective well-being in later life: a meta-analysis. *Psychol Aging* 2000; 15: 187-224.
- Michael YL, Colditz GA, Coakley E, Kawachi I: Healthy behaviors, social networks, and healthy aging: cross-sectional evidence from the Nurses' Health Study. *Qual Life Res* 1999; 8: 711-22.
- Sherbourne CD, Meredith LS, Rogers W, Ware JE: Social support and stressful life events: age differences in their effects on health-related quality of life among the chronically ill. *Qual Life Res* 1992; 1: 235-46.
- Bosworth HB, Siegler IC, Olsen MK, et al: Social support and quality of life in patients with coronary artery disease. *Qual Life Res* 2000; 9: 829-39.
- Swindells S, Mohr J, Justis JC, et al: Quality of life in patients with human immunodeficiency virus infection: impact of social support, coping style and hopelessness. *Int J STD AIDS* 1999; 10: 383-91.
- Courtens AM, Stevens FC, Crebolder HF, Philippen H: Longitudinal study on quality of life and social support in cancer patients. *Cancer Nurs* 1996; 19: 162-9.
- Schaefer C, Coyne JC, Lazarus RS: The health-related functions of social support. *J Behav Med* 1981; 4: 381-406.
- Hornquist JO: The concept of quality of life. *Scand J Soc Med* 1982; 10: 57-61.
- Katz S: The science of quality of life. *J Chronic Dis* 1987; 40: 459-63.
- Schipper H: Guidelines and caveats for quality of life measurement in clinical practice and research. *Oncology* 1990; 4: 51-7.
- Greenley JR, Greenberg JS, Brown R: Measuring quality of life: a new and practical survey instrument. *Soc Work* 1997; 42: 244-54.
- Simsek Z: Ya'am kalitesi ölçeğinin psikometrik değerlendirilmesi. *Toplum Sosyal Hizmet* 2001; 12: 3-30.
- Andrews FM, Witney SB: *Social Indicators of Well-Being*. New York, NY, Plenum Press, 1976.
- Campbell A, Converse PE, Rogers WL: *The Quality of American Life*. New York, NY, Russell Sage Foundation, 1976.
- Diener E: Subjective well-being. *Psychol Bull* 1984; 95: 542-75.
- Skantze K, Malm V, Dencker S, May P, Corrigan P: Comparison of quality of life with standard of living in schizophrenic out-patients. *Br J Psychiatry* 1992; 161: 797-801.
- Browne S, Roe M, Lane A, et al: Quality of life in schizophrenia: relationship to sociodemographic factors, symptomatology and tardive dyskinesia. *Acta Psychiatrica Scand* 1996; 94: 118-24.
- Carpiniello B, Lai G, Praiante CM, Carta MG, Rudas N: Symptoms, standards of living and subjective quality of life: a comparative study of schizophrenic and depressed outpatients. *Acta Psychiatrica Scand* 1997; 96: 235-41.
- Rodgers WL, Converse PE: Measures of the perceived overall quality of life. *Soc Indicat Res* 1975; 2: 127-52.
- Bradburn HM: *The Structure of Psychological Well-Being*. Chicago, IL, Aldine Press, 1969.

43. Kearns RA, Taylor SM, Dear M: Coping and satisfaction among the chronically mentally disabled. *Can J Community Ment Health* 1987; 6: 13-25.
44. Lehman AF, Slaughter JG, Myers CP: A randomized trial of assertive community treatment for homeless persons with severe mental illness. *Arch Gen Psychiatry* 1992; 54: 1038-43.
45. Mercier C, Peladeau N, Tempier R: Age, gender and quality of life. *Community Ment Health J* 1998; 34: 487-99.
46. King LA, King DW, Fairbank JA, Keane TM, Adams GA: Resilience-recovery factors in post-traumatic stress disorder among female and male Vietnam veterans: hardiness, postwar social support, and additional stressful life events. *J Pers Soc Psychol* 1998; 74: 420-34.
47. Fontana A, Schwartz LS, Rosenheck R: Posttraumatic stress disorder among female Vietnam veterans: a causal model of etiology. *Am J Public Health* 1997; 87: 169-75.
48. Ren XS, Skinner K, Lee A, Kazis L: Social support, social selection and self-assessed health status: results from the Veterans Health Study in the United States. *Soc Sci Med* 1999; 48: 1721-2.
49. Hyer L, Stanger E, Boudewyns P: The interaction of posttraumatic stress disorder and depression among older combat veterans. *J Clin Psychol* 1999; 55: 1073-83.
50. Karestan C, Koenen KC, Stellman JM, Stellman SD, Sommer JF: Risk factors for course of posttraumatic stress disorder among Vietnam veterans: a 14-year follow-up of American legionnaires. *J Consult Clin Psychol* 2003; 71: 980-6.
51. Cohen S, Willis TA: Stress, social support, and the buffering hypothesis. *Psychol Bull* 1985; 109: 5-24.
52. Linn JG, Lewis FM, Cain VA, Kimbrough GA: HIV-illness, social support, sense of coherence, and psychological well-being in a sample of help-seeking adults. *AIDS Educ Prev* 1993; 5: 254-62.
53. Lennon MC, Martin JL, Dean L: The influence of social support on AIDS-related grief reaction among gay men. *Soc Sci Med* 1990; 31: 477-84.
54. Siegel K, Raveis VH, Karus D: Psychological well-being of gay men with AIDS: contribution of positive and negative illness-related network interactions to depressive mood. *Soc Sci Med* 1994; 39: 1555-63.



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