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RESEARCH

QUALITY OF LIFE OF ELDERLY PEOPLE AGED 65 YEARS AND OVER LIVING AT HOME IN SIVAS, TURKEY

ABSTRACT

Introduction: The study was conducted to investigate the Quality of Life (QOL) of adults aged 65 years and over living at home in Sivas city center.

Materials and Method: The study was conducted as a cross-sectional study. Data was collected by face to face interviewing technique using SF-36 QOL Scale and a form designed by the researchers for recording socio-demographic characteristics.

Results: 45.4% of the participants were between 65-69 years of age, 51.9% were female, 43.4% were illiterate, and 42.7% lived with their spouses. Total SF-36 Scale score was found to be lower than acceptable in adults 65 years and older. The QOL was found to decrease with increasing age, and increase with increasing educational level. Spare time activities were a significant factor affecting QOL and having a chronic illness decreased QOL.

Conclusion: Nurses may contribute to improve the QOL of the elderly with regular visits and systematic assessment and interventions especially by taking into consideration the effect of age, education, spare time activities and having a chronic illness.

Key words: Quality of life, SF-36, Elderly.

ARAŞTIRMA

SİVAS İLİNDE EVDE YAŞAYAN 65 YAŞ VE ÜZERİ BİREYLERİN YAŞAM KALİTESİ

ÖZ

Giriş: Bu çalışma, kentsel alanda evde yaşayan 65 yaş ve üzeri bireylerin yaşam kalitesini belirlemek amacıyla yapıldı.

Gereç ve Yöntem: Bu çalışma kesitsel tipte bir çalışma olarak yapılmıştır. Veriler araştırmacılar tarafından hazırlanan sosyodemografik veri formu ve SF 36 yaşam kalitesi ölçeği kullanılarak yüz yüze görüşme yöntemiyle toplanmıştır.

Bulgular: Katılmcıların %45.4'ü 65-69 yaşları arasındaydı, %51.9'u kadındı, %43.4'ü okuryazar değildi ve %42.7 si eşiyle birlikte yaşıyordu. Toplam SF-36 puanı ortalaması normalden düşüktü. Yaşlıların yaşı arttıkça yaşam kalitesi düşüyor, öğrenim durumu yükseldikçe yaşam kalitesi artıordu. Boş zaman aktivitesi durumları yaşam kalitesini anlamlı derecede etkilerken, kronik hastalık bulunması, yaşlılarda yaşam kalitesini düşürmektedir.

Sonuç: Hemşireler özellikle yaşlının yaşı, öğrenim durumu, boş zaman geçirme biçimleri ve kronik hastalık bulunmasının etkilerini göz önünde bulundurarak yaptıkları düzenli ziyaretlerle, sistematik değerlendirme ve uygulamalarla yaşlıların yaşam kalitesini iyileştirebilirler.

Anahtar sözcükler: Yaşam kalitesi, SF-36, Yaşlı.

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INTRODUCTION

The world population has rapidly grown older in the last 50 years with the lengthening of lifespan and a decrease in birth rates. Ageing as a global phenomenon is also the result of sociodemographic changes, mainly through improvements in sanitation and public health. There are 400 million people in the world today who are 65 years and older; in 2050 it is expected that this number will increase four-fold and be over 1.5 billion(1). It has also been suggested that a significant proportion of this increase will occur in developing countries like Turkey. According to the census results in Turkey, in 1990, 1997, and 2005 the population of adults 65 years and older was 4.3%, 5.73%, and 8.4%, respectively. It is expected that it will increase to 10.9% in 2032 (2). Also, from a public health perspective, it is important to help older people to maintain their independence and their active contribution to their family and society. Also, it is important that elderly people should be supported to respond successfully to the physical, psychological and social challenges they face. Morbidity of chronic diseases is increased with age. In recent years there has been a increasing interest in the evaluation of quality of life (QOL) in older aged people (3).

The World Health Organization has defined health-related QOL as "an individual's perception of his/her position in the life in the context of the culture and value systems in which he/she lives, and in relation to his/her goals, expectations, standards and concerns" (4). Self identity, family and income status affect the perception of quality and this also has an effect on QOL (5). The loss of some social roles and independence, retirement, deaths of friends and relatives, the death of a spouse, children leaving home, increasing feelings of loneliness, financial difficulties, and various illnesses that arise as a result of these changes have an effect on the QOL of an elderly individual (6).

The responsibility to meet the health care needs of the elderly in Turkey is under the primary health care services .According to the directive, "Administering Health Care Services", which went into effect on December, 2001, geriatric health care services were determined to be the duty of primary health services. In the same directive, the duties of nurses, health officers and midwives who work in primary healthcare centers were clearly defined in carrying out geriatric health care services (7). However, in studies conducted in primary healthcare centers in Turkey, it has been determined that geriatric health care services were not provided adequately for various reasons (such as, inadequate knowledge about their responsibilities, unwillingness, negative attitudes towards the elderly (8, 9). It has also been determined in previous studies that nurses' implementing their professional roles has an effect on increasing the QOL of elderly individuals (10, 11). QOL tools are used more in nursing research because they give appropriate results for the evaluation of the effect of nursing care and since it is easy to develop of alternative strategies (12). The stated purposes in studies which have used QOL tools, have been data collection about the health status of large groups and to use the results in creating health policy, and in creating a database for services that are provided (13, 14).

Small number of adults 65 years and older are cared for in institutions in Turkey and 96.4% of them live in their homes since they prefer to live in their own homes and the number of nursing homes is Turkey is not adequate (15,16). This study was conducted to investigate the QOL of adults 65 years and older and who live at home in Sivas City Center.

MATERIALS AND METHOD

This study was conducted as a cross-sectional study between Jaunary 15, 2005 and June 25, 2005,.with a total of 10 primary healthcare centers in urban areas. According to data from this census of Turkey, the central county of Sivas had a population of 252,000 and 12,344 (4.9%) of these individuals are 65 years and older. Sivas province has a long history, continues to have traditional attitudes with its low educational level and high rate of unemployment, and is one of Turkey's least developed provinces.

The research population was comprised of a total of 12,344 residents of the central county of Sivas who were 65 years or older and were registered at one of the 10 primary healthcare centers. From the 12,344 individuals who were 65 years and older, 403 individuals were taken into the sample. The sample number was determined using $p = 0.30$, $q = 0.70$, $d = 0.05$, $t = 1.96$ values to choose 403 elderly. Then taking the number of individuals 65 years and older that were registered at the primary healthcare centers where the research would be conducted and using a stratified non-probability sampling method, every center was considered one strata since the regions covered by the centers have different socioeconomic levels, and the number of elderly to be taken into the sample was determined. When determining the elderly individuals to be taken into the sample the household recording

cards that are used in the primary health care centers were taken into consideration and a systematic sampling method was used.

Two questionnaire forms designed by the researchers were used for data collection about sociodemographic data and the SF 36 QOL scale in this study. The first form was about personal information and included 20 questions about the socioeconomic characteristics of the elderly.

The second form was the SF-36 QOL Scale, Turkish Version, which has been tested for validity and reliability by Pınar (14). The SF-36 QOL Scale has been used in clinical practice and research in the determination of health policies and in the examination of general populations and was developed by Ware and Sherbourne (17) as the Short-Form Health Survey (SF-36). . The SF-36 version 1.0 is a short form questionnaire with 36 items that measured eight health related quality of life domains: physical functioning (PF), social functioning (SF), role limitation due to physical problems (RP), role limitation due to emotional problems (RE), mental health (MH), energy and vitality (VT), bodily pain (BP), and general perception of health (GH).The answer alternatives used were yes/no, on three-grade (1 $^{1}/_{4}$ yes, greatly limited, 3 $^{1}/_{4}$ no, not at all limited), five-grade (e.g. 1 $^{1}/_{4}$ not at all, 5 $^{1}/_{4}$ very much) and six-grade scales (1 $^{1}/_{4}$ all the time, 6 $^{1}/_{4}$ none of the time). The scores for each scale are coded, summed, and transformed into a scale ranging from 0 (worst possible health) to 100 (17). The SF-36 also provides a summary of several of the scales to two components supported by factor analysis: the physical component score (PCS) and the mental component score (MCS). The PCS includes four subscales: PF, role functioning due to limitations in role physical, bodily pain, and general health.The MCS also includes four subscales: vitality, social functioning, role limitations due to emotional problems, and mental health.The Cronbach's alpha of the SF-36 was 0.89 in our study.

Permission required to use the questionnaires was obtained from the Ministry of Health (Directorate of Health)and the primary healthcare centers. Then the homes of the individuals 65 years and older who would be taken into the sample were determined from the forms This sentence is unnecessary. The homes were visited and after the elderly individuals gave their permission, the study forms were completed by the researcher using a face-to-face interview technique.

Data were presented as mean ± standard deviation and percentage as appropriate. Statistical analyses were performed with Statistics 7.0 Software (Statsoft, Inc., Tulsa, AR, USA). The QOL scores were compared with ANOVA followed by post hoc Tukey test. A p-value of < 0.05 was considered significant.

RESULTS

Table 1 A total of 403 adults (male = 194, female = 209) 65 years and older living at home were studied. Of the research participants, 45.4% were between 65-69 years of age, 51.9% were female, 43.4% were illiterate, and 42.7% lived together with their spouses. 82.6 % had chronic dieases.

Table 2 presents their Average SF-36 scores including PF, SF, RP, RE, MH, VT, BP, and GH. SF score was the highest (59.8 ± 24.5) and role physical score (43.4 ± 37.3) was the lowest.

Table 3 shows SF-36 Scale Score of the study population according to age groups of 65-69 (n=183), 70-74 (n=113), 75-79 (n=64), 80-84 (n=29), and 85 and over (n=14). Overall, there were significant differences among the age groups with regard to PF, RP, RE, VT, BP, PCS, and MCS ($p<0.05$); and there were no significant differences among the age groups with regard to SF, MH, and GH ($p>0.05$). The PF, RP, RE, and VT scores of 65-69 and 70-74 age groups were significantly higher than those of all of other parameters ($p<0.05$). The PF, RP, RE, and VT scores of 75-79 and 80-84 age groups were significantly higher than 85 and above age group ($p<0.05$). The BP score of 65-69 age group was significantly higher than 80-84 age group ($p<0.05$).

Table 4 shows average SF-36 Scale Scores of the study population according to education level of illiterate (n=175), literate (n=191), primary school (n=95), secondary school (n=22), and high school and above (n=20). Overall, there were significant differences among education levels with regard to PF, RP, BP, GH, PCS, and MCS ($p<0.05$); and there were no significant differences among education levels with regard to SF, RE, MH, and VT ($p>0.05$). The PF,RP, VT,BP, and GH scores of high school and above were significantly higher than those of all of other parameters ($p<0.05$).

Table 5 shows average SF-36 Scale Scores of the study population according to spending time as handcrafts (n=58), reading newspaper (n=16), walking and shopping (n=33), watching TV/listening to radio (n=54), worshipping (n=126), and meeting with friends (n=116). Overall, there were significant differences among spending times with re-

Tablo 1— Distribution of the sociodemographic characteristics in the study group (Sivas, 2005)

Characteristics	n (%)
Sex	
Male	194 (48.1)
Female	209 (51.9)
Marital Status	
Married	251 (62.3)
Widow	152 (37.7)
Education Status	
Illiterate	175 (43.4)
Literate	91 (22.6)
Primary school	95 (23.6)
Secondary school	22 (5.4)
High school and above	20 (5.0)
Age Group	
65–69	183 (45.4)
70–74	113 (28.0)
75–79	64 (15.9)
80-84	29 (7.2)
85 and over	14 (3.5)
The Person/s Living With	
Alone	90 (22.3)
Partner	172 (42.7)
Children	134 (33.3)
Other	7 (1.7)
Occurrence of Chronic Disease	
Absent	70 (17.4)
Present	333 (82.6)
Chronic disease (n=333)	
Cardiovascular	177 (53.1)
Musculoskeletal	103 (30.9)
Respiratory	42 (12.6)
Gastrointestinal	58 (17.4)
Neuropathy	23 (6.9)
Urogenital	36 (10.8)
Metabolic	24 (7.2)

Tablo 2— Mean SF-36 scores of the study population (Sivas, 2005)

Scores	Mean ± SD	Min Max
PF	48.6 ± 30.2	0.00-100.0
RP	43.4 ± 37.3	0.00-100.0
BP	58.4 ± 24.3	0.00-100.0
GH	48.5 ± 22.3	0.00- 95.0
VT	46.0 ± 20.4	0.00-100.0
SF	59.8 ± 24.5	0.00-100.0
RE	51.5 ± 48.2	0.00-100.0
MH	51.5 ± 10.6	20.0-80.0
PCS	48.9 ± 26.8	1.25- 98.75
MCS	52.2 ± 19.1	9.25- 90.22
Total score	**50.6 ± 29.3**	**20.0-80.0**

PH, Physical functioning; SF, Social functioning; RP, Role physical; RE, Role emotional; MH, Mental health; VT,Vitality; BP, Bodily pain; PCS, Physical component score; MCS, Mental component score.

gard to PF, RE, MH, VT, BP, GH, PCS, and MCS ($p<0.05$); and there were no significant differences among spending times with regard to SF, and PF($p>0.05$). The PF score of reading and walking and shopping were significantly higher than those of worshipping, meeting with friends, watching TV/ listening to radio, and handgraft ($p<0.05$). The PF score of worshipping and meeting with friends were significantly higher than those of watching TV/ listening to radio and handgraft ($p<0.05$). The RE score of walking and shopping was significantly higher than those of all of other parameters ($p<0.05$). The MH score of meeting with friends was significantly higher than those of worshipping and watching TV/ listening to radio ($p<0.05$). The VT score of worshipping was significantly higher than that of watching TV/ listening to radio ($p<0.05$). The BP score of reading was significantly higher than those of all of other parameters ($p<0.05$).The GH score of reading, walking and shopping, and worshipping were significantly higher than those of all of other parameters ($p<0.05$).

Table 6 shows average SF-36 Scale Scores of the study population according to presence of chronic illness (present in 339 subjects and absent in 70 subjects). PF, RP, BP, GH, VT, SF, RE, MH, PCS, and MCS scores were significantly higher in subjects without chronic illness than those with chronic illness ($p<0.05$).

Discussion

Among average SF-36 scale scores, SF score was the highest and RP score was the lowest (Table 2). In our study, total SF-36 Scale score was lower than acceptable in adults 65 years and older and who lived at home in urban areas of the central county of Sivas, a central Anatolian city, in Turkey. In a study conducted with 1047 elderly individuals living in home in Mugla province in Turkey, the highest QOL score was in RE and was 54.3±45.9, the lowest score was in VT and 36.5±16.2 (18). The majority of the elderly in Sivas province live in extended families, have good relationships with their friends and neighbors and the QOL for them could be higher

Tablo 3— Mean SF-36 scores of the study population according to age groups (Sivas, 2005)

	Age Groups(years)					
Scores	65-69 (n=183) Mean ± SD	70-74 (n=113) Mean ± SD	75-79 (n=64) Mean ± SD	80-84 (n=29) Mean ± SD	85 and over (n=14) Mean ± SD	Test
PF	60.1 ± 27.4	44.7 ± 26.9	37.7 ± 27.6	35.5 ± 35.7	6.9 ± 14.6	F=20.61 p=0.00
RP	57.8 ± 47.1	36.7 ± 46.0	33.2 ± 44.3	20.7 ± 41.2	3.6 ± 9.0	F=10.61 p=0.00
BP	61.3 ± 30.3	52.4 ± 24.1	52.4 ± 24.1	42.9 ± 27.3	42.1 ± 32.9	F=4.06 p=0.03
GH	51.8 ± 21.7	45.5 ± 22.7	46.1 ± 18.7	48.8 ± 28.3	40.0 ± 25.1	F=2.25 p=0.63
VT	50.2 ± 19.4	44.6 ± 19.9	43.5 ± 20.8	37.4 ± 21.5	29.6 ± 16.9	F=6.18 p=0.00
SF	61.4 ± 22.7	60.8 ± 26.3	57.8 ± 22.9	57.1± 27.3	46.8 ± 31.5	F=1.41 p=0.22
RE	66.7 ± 45.3	43.4± 48.4	39.1 ± 46.6	27.6 ± 45.5	26.2 ± 39.6	F=9.92 p=0.00
MH	51.1 ± 10.5	52.0 ± 10.7	53.6 ± 10.7	49.8 ± 9.5	47.1 ± 11.6	F=1.54 p=0.18
PCS	57.7 ± 25.0	44.8 ± 27.2	42.3 ± 2.7	36.9 ± 27.9	23.1 ± 14.9	F=12.50 p=0.00
MCS	57.4 ± 17.1	50.2 ± 18.9	48.4 ± 19.4	42.9 ±21.6	37.4 ± 18.4	F=8.69 p=0.00

PH, Physical functioning; SF, Social functioning; RP, Role physical; RE, Role emotional; MH, Mental health; VT,Vitality; BP, Bodily pain PCS, Physical component score; MCS, Mental component score.

for those who do not have problems with their social activities because of daily struggles.

There were significant differences among the age groups with regard to PF, RP, and PCS ($p<0.05$). PF, RP, and PCS mean scores in accordance with age increased, the quality of live decreased (Table 3). In a study by Mikami and Ogihara(19), as well a significant fall was also found in QOL with aging . In similar studies conducted in a large group, a significant decrease in every QOL subscale score was found with aging(20-23). However the decrease in QOL with age as a result of slow loss of PF and SF can be explained by the occurrence of RP and RE losses, increase in dependence, beginning of age discrimination, decrease in immune system functioning, and the effect of an increase in chronic illnesses and bodily pain.

There were significant differences among education levels with regard to VT ($p<0.05$). Overall, as the educational level increased, the QOL also increased (Table 4). In a study by Tseng et al. (24), it was determined that an increase in educational level increased an individual's socioeconomic status and this situation had a positive effect on QOL. In a project conducted in Bangladesh provisions were made for couples to send their daughters to school and there was a significant increase in the QOL of these girls (25). In several studies conducted in our country and investigating factors affecting the QOL according to education level, it was found that education level was significant factor affecting QOL and increased education level resulted in good QOL (21, 26-29). This effect can be explained by factors such as the educational level causing an increase in awareness, change and improvement in outlook on life, perception and opportunities, increased job opportunities, and having a right to retirement and some social benefits.

Overall, there were significant differences among spending time with regard to GH, and MH ($p<0.05$) Activities that encourage individuals to participate actively in life were found to increase QOL scores, but passive activities such as watching TV/listening to radio decreased QOL scores (Table

Tablo 4— Average SF-36 scores of the study population according to education levels (Sivas, 2005)

	Education Status					
	Illiterate (n=175) Mean ± SD	Literate (n=191) Mean ± SD	Primary school (n=95) Mean ± SD	Secondary school (n=22) Mean ± SD	High school and above (n=20) Mean ± SD	Test
PF	41.2± 28.7	51.5 ± 32.6	54.7 ± 29.4	52.3 ± 27.0	67.5 ± 23.2	F=6.17 p=0.00
RP	34.4 ± 45.5	37.9± 47.5	58.4 ± 45.3	51.1 ± 49.1	67.5 ± 46.7	F=6.00 p=0.00
BP	48.9± 44.1	52.4 ± 49.3	63.5 ± 48.4	66.7 ± 57.0	74.44 ± 46.0	F=6.85 p=0.00
GH	46.3 ± 21.3	46.1 ± 24.7	51.6 ± 21.1	45.7 ± 19.0	66.7 ± 20.3	F=4.73 p=0.00
VT	43.6± 21.5	44.1 ± 19.1	49.3 ± 18.6	48.4± 22.2	57.0 ± 17.9	F=3.01 p=0.01
SF	56.4 ± 25.6	60.9± 25.6	62.3 ± 22.0	68.7 ± 19.3	63.3 ± 23.4	F=2.00 p=0.94
RE	44.6 ± 47.7	48.0 ± 49.0	61.0± 46.5	62.1 ± 48.6	70.0 ± 47.0	F=2.99 p=0.01
MH	52.0 ± 11.3	50.5 ± 9.3	52.4 ± 10.0	52.5 ± 9.0	46.0 ± 12.8	F=1.92 p=0.10
PCS	42.7 ± 25.4	46.9 ± 28.4	57.0 ± 25.1	53.9 ± 24.5	69.0 ± 23.7	F=8.18 p=0.00
MCS	49.2 ± 19.1	50.8 ± 20.0	56.2 ± 18.0	57.9 ± 15.5	59.0 ± 18.3	F=3.44 p=0.00

PH, Physical functioning; SF, Social functioning; RP, Role physical; RE, Role emotional; MH, Mental health; VT,Vitality; BP, Bodily pain PCS, Physical component score; MCS, Mental component score.

5). Individuals who stated that they spend their time in passive activities such as watching/listening to TV/radio and doing handcrafts were found to have lower QOL scores than those who spent their time in more active pursuits. In a study it was found that QOL scores were 5.86 times higher in participants who had (regular) physical activity habits (30).In a study by Houx and Jalles (31), education, intellectual activities, and, for example, the length of time spending reading per week was found to have significant effects on memory loss in the elderly and on staying younger. However, in a study by Koening et al. (32), depressed elderly individuals who were interested in religious activities were monitored and during that period the severity of their depression was found to decrease. Physical activities are thought to have an important place in elderly individuals' socialization and mental health. In spite of this, the majority of the elderly choose to remain sedentary. In a study by Xavier et al. activities throughout the day were found to have a positive effect on the QOL of the elderly (33). In the results of a study by Stephan and Castel (34), in elderly individuals, the decrease in PF that comes with age leads to a decrease in physical activities and a quite passive lifestyle in activities of daily living. In another study conducted in the elderly, it was determined that regular exercise and staying active lead to a decrease in systemic illnesses. In addition, the elderly who did carry out an appropriate exercise program had an increase in the level of independence in activities of daily living (35). The situation of the elderly in Turkey, and in Sivas, in particular, having a low socioeconomic level, families seeing the elderly who live at home to be a burden, and inadequate social and support services provided for the elderly have an effect on the QOL of the elderly.

PF, RP, BP, GH, VT, SF, RE, PCS, and MCS scores were significantly higher in subjects without chronic illness than those with chronic illness ($p<0.05$). An individual having a chronic illness is a significant factor affecting QOL (Table 6). The presence of a chronic illness was found to significantly

Tablo 5— Average SF 36 scores of the study population according to spare time activities (Sivas, 2005)

	Handgraft (n=58) Mean ± SD	Reading (n=16)	Walking and shopping (n=33)	Watching TV/ listening to radio (n=54)	Worshipping (n=126)	Meeting with friends (n=116	Test
PF	47.1±28.4	72.5±15.4a	60.1±27.9a	35.2±33.6	47.6± 28.5	50.1± 30.6	F=5.48 p=0.00
RP	44.4 ±47.5	48.4± 48.7	50.0 ±47.2	28.2 ±43.2	39.5 ± 47.5	51.7± 47.5	F=2.20 p=0.53
BP	53.1 ±30.2	67.4 ±30.2	64.3 ±29.2	46.9 ±30.8	52.0± 31.1	59.9± 30.0	F=2.77 p=0.01
GH	43.2 ±15.9	55.3 ±21.5	54.5 ±23.7	36.8 ±23.5	52.3 ± 23.1	49.8 ±21.3	F=5.47 p=0.00
VT	46.1± 20.6	47.2 ±20.8	48.3± 16.0	37.1 ±23.2	48.8 ±22.0	46.0 ±17.1	F=2.68 p=0.02
SF	60.7 ± 25.1	61.1 ± 21.1	64.3 ± 18.8	51.8 ± 28.2	59.4 ± 24.3	62.1 ± 24.0	F= 1.60 p=0.15
RE	57.5 ±47.0	50.0 ±51.6	78.8 ±38.0	33.3 ±46.2	44.8 ± 48.3	56.6 ± 48.0	F=4.78 p=0.00
MH	52.3 ±11.6	47.7 ±10.4	54.2 ±10.4	48.1 ±10.4	50.1 ± 10.7	54.0 ± 9.4	F=3.84 p=0.00
PCS	46.9 ±24.2	60.9± 20.4	57.2 ±25.0	36.7 ±28.8	47.8 ± 26.0	52.8 ±26.8	F=4.23 p=0.00
MCS	54.1 ±16.9	51.5±19.9	61.4±13.4	42.6±21.2	50.9±19.7	54.6±18.0	F=5.11 p=0.001

PH, Physical functioning; SF, Social functioning; RP, Role physical; RE, Role emotional; MH, Mental health; VT,Vitality; BP, Bodily pain PCS, Physical component score; MCS, Mental component score.

decrease the QOL in every scale except MH. In similar studies, an individual having a chronic illness is a significant factor affecting the quality of life (23,24, 36,37).As the number of chronic illnesses in an individual increases, there is a significant decrease in their QOL. In research conducted in the elderly hemodialysis patients, the QOL was found to be low and this situation was found to be related to their increase in dependence (38). Osteoporosis is the most commonly seen skeletal disorder that causes disability and pain in individuals over 65 years (39). In this study 25.6% of the individuals were also found to have musculoskeletal system disorders. The complications of osteoporosis can be a cause for high morbidity and mortality. The cost of osteoporosis for society is not just related to the medical and rehabilitation costs. Chronic pain and physical dependence have a negative effect on the QOL of the elderly (39). In a study by David and Shulamith (40), pain was found to have an extremely significant effect on physical and emotional functioning and decreased QOL. In research by Jaracz and Kozubski (41), the QOL scores of a group of healthy individuals were compared with scores from a group of stroke patients and the stroke patients' QOL scores were found to be quite low. In another study investigating correlation between having chronic obstructive pulmonary disease and QOL, a positive correlation was found between QOL scores and level of dyspnea compared to the severity of the illness as determined by pulmonary function parameters (42).

Information of QOL is useful for health and social professionals with the objective to plan actions according to the needs of population and to evaluate the impact of these actions. Provision of services at different levels of care/rehabilitation can reduce the burden of the most common older people conditions and enhance patients' QOL. Also, older people might and should contribute to maintain and to improve their QOL through preventive measures that have been proven to be effective.

In conclusion, it is necessary to evaluate the planning and implementation of services for the elderly by taking into consideration the effect of age, education, spare time activiti-

Tablo 6— Average SF 36 scores of the study population according to presence of chronic illness (Sivas, 2005)

	Chronic Illness		
	Present (n=333)	**Absent (n=70)**	
PF	44.4 ± 28.5	68.6 ± 30.3	t=6.389 p=0.001
RP	38.3 ± 46.1	67.9 ± 45.7	t=4.886 p=0.001
BP	52.1 ± 29.1	70.6 ± 34.2	t=4.684 p=0.001
GH	45.7 ± 21.4	62.0 ± 21.9	t=5.780 p=0.001
VT	44.4 ± 19.8	53.5 ± 21.7	t= 3.466 p= 0.001
SF	57.2 ± 24.0	72.4 ± 23.1	t=4.844 p=0.001
RE	47.0±47.9	72.9± 44.1	t= 4.160 p=0.001
MH	51.1 ± 10.8	53.5 ± 9.7	t=1.774 p=0.044
PCS	45.1±24.9	67.2±28.2	t=6.590 p=0.001
MCS	43.9±18.5	63.0±18.0	t=5.393 p=0.001

PH, Physical functioning; SF, Social functioning; RP, Role physical; RE, Role emotional; MH, Mental health; VT,Vitality; BP, Bodily pain PCS, Physical component score; MCS, Mental component score.

es and having a chronic illness on the QOL of the elderly. To increase the education level will make an important contribution to the QOL, and literacy courses can be used to benefit reading and gaining information. Public health approaches are required to increase the activity of elderly, but a very inactive elderly person is less likely to want to attend group-based programs and may be more interested in self-help or home-based methods. Preventive health services be strengthened and targeted at chronic illnesses in the elderly to improve personal care related to chronic illnesses. As life expectancies become higher, it becomes more important to understand issues related to QOL. Finally, future research could involve friends and family members of the elderly to determine their effect on the QOL of the elderly.

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