

## THE IMPACT OF LIVING CONDITIONS OF AGED INDIVIDUALS ON THEIR DAILY ROUTINES AND STATE OF LONELINESS: CASE OF TURKEY

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### ABSTRACT:

**Background:** We aimed to determine daily routines of aged people living in nursing homes or with family and to find out their state of loneliness.

**Methods:** The field study has been carried out at Semiha Şakir Nursing Home and Rehabilitation Center for Aged People and Izzet Baysal Nursing Home, affiliated to the Provincial Directorate of Social Services as well as at Zeytinburnu Primary Health Care Center affiliated to the Ministry of Health, after having received the required permissions from related institutions. The universe of study has been defined as 120 elderly people staying at nursing homes during October 2009–April 2010 or those staying with families in Istanbul province. Data have been collected through Data Collection Form based on the University of California Los Angeles Loneliness Scale (UCLA-LS) and Katz Daily Routines Index.

**Results:** Age and gender do not affect feeling of loneliness ( $p>0.05$ ), old married people feel less lonely ( $p<0.001$ ). A decrease in feeling of loneliness has been observed with an increase in education and income level ( $p<0.001$ ). People staying at nursing homes are more dependent in every day activities, but feel more lonely than those staying with their families ( $p<0.01$ ).

**Conclusion:** Economic support for aged people should be provided in order for them to afford minimum-level living conditions, and they should have social security. Services for aged people should be aimed to keep them at home in contact with the society outside. Healthcare personnel should be more informed on the issue, and related studies should be increased.

**Keywords:** Nursing homes, aged, activities of daily living, loneliness

## YAŞLILARIN YAŞAMA ORTAMLARININ GÜNLÜK YAŞAM AKTİVİTELERİ VE YALNIZLIK YAŞAMA DURUMLARI ÜZERİNE ETKİSİ: TÜRKİYE ÖRNEĞİ

### ÖZET:

**Amaç:** Huzurevlerinde ve aile ortamında yaşayan yaşlıların günlük yaşam aktivitelerinin saptanması ve yalnızlık yaşama durumlarının belirlenmesi amacıyla tanımlayıcı olarak planlandı.

**Gereç ve Yöntem:** Araştırma, İl Sosyal Hizmetler Müdürlüğüne bağlı Semiha Şakir Huzurevi Yaşlı Bakım ve Rehabilitasyon Merkezi ve İzzet Baysal Huzurevinde, Sağlık Bakanlığına bağlı Zeytinburnu Merkez Sağlık Ocağında kurumlardan gerekli izinler alındıktan sonra gerçekleştirildi. Çalışmanın evrenini, Ekim 2009- Nisan 2010 tarihleri arasında İzzet Baysal Huzurevinde, Semiha Şakir Huzurevi Yaşlı Bakım ve Rehabilitasyon Merkezinde kalan yaşlılar ve İstanbul ilinde aile ortamında yaşayan yaşlılar oluşturmaktadır. Çalışmanın örneklemini ise, çalışmanın yapılacağı huzurevlerinde ve İstanbul ilinde aile ortamında yaşayan, araştırma kriterlerine uygun toplam 120 yaşlı oluşturmaktadır. Veriler, Veri Toplama Formu, University of California Los Angeles Loneliness Scale (UCLA-LS Yalnızlık Skalası), Katz'ın Günlük Yaşam Aktiviteleri İndeksi kullanılarak toplandı. Verilerin analizi bilgisayar ortamında SPSS 16.0 istatistik hesaplama programı yardımıyla yüzdeler, dağılımlar, ki-kare ( $X^2$ ), student t testi one-way anova testi kullanılarak yapıldı.

**Bulgular:** Huzurevleri ve aile ortamında yaşayan yaşlılarda yaş ve cinsiyetin yalnızlık yaşama durumlarını etkilemediği ( $p>0.05$ ), evli olan yaşlıların daha az yalnızlık yaşadıkları belirlendi ( $p<0.001$ ). Aynı zamanda yaşlıların eğitim durumu ve gelir kaynakları arttıkça yalnızlık yaşama durumlarının azaldığı saptandı ( $p<0.001$ ).

**Sonuç:** Huzurevlerinde yaşayan yaşlıların aile ortamında yaşayan yaşlılara göre günlük yaşam aktivitelerinde daha bağımlı oldukları ve daha fazla yalnızlık yaşadıkları saptandı ( $p<0.01$ ). Bu sonuçlar doğrultusunda; Bütün yaşlılara, en asgari yaşam düzeyini sürdürebilmeleri için gerekli ekonomik destek sağlanmalı, yaşlıların tümü sosyal güvence altına alınmalı, yaşlılara yönelik hizmetler onları mümkün olduğu kadar evlerinde ve toplumla temas halinde tutmayı amaçlamalıdır. Sağlık personeline geriatri alanında daha çok bilgi verilmeli ve bu konudaki araştırmalar artırılmalıdır.

**Anahtar Sözcükler:** Huzurevleri, yaşlı birey, günlük yaşam aktivitesi, yalnızlık

## INTRODUCTION

Aging is a truth for living and non-living organisms. History of gerontology and geriatrics is recorded back as pre-historical ages. Some philosophers like Aristotle and Seneca described old age as an incurable disease while Calen made some clinical observations through a different approach and accepted that as an unavoidable and natural process (1-3).

World Health Organization assumed completed age of 64 (65 and older ages) as the initial step of aging in 1989. Thus, communities are considered as young or old societies regarding the aged population in comparison with the general population (4,5).

The fact aging, a current issue for a quarter of century, has enforced countries to take precautions adaptable for various situations. Population changes in countries totally industrialized in the 20<sup>th</sup> century have resulted in some societal problems mainly related to social security and healthcare services and some changes in family lives (6).

The more aged population increases, the more problems occur. Advanced age brings about cognitive defects added to perceptual defects, which in total affect daily routines of aged people. 80% of individuals aged 65 and over suffer from one or more chronic physical illnesses as well as nutritional, digestive and sleeping disorders. These problems avoid them from surviving themselves alone, which negatively influence their life quality, so that psychological problems are frequented in this age group (7,8).

Aging sets the ground for the feeling of loneliness as a result of many changes and increasing losses. In cases of anxiety caused by inefficiency in daily routines, aged individual may limit his/her activities to ease the stress or resists recent changes and feel dependent. There is a significant correlation between physical condition and loneliness in aged people. Bad physical condition might negatively affect feeling of loneliness in aged individual. The person tends to think negatively rather than positively and concentrate more on him/herself. Such individuals ought to be tolerated and psychological counseling should be given (6,9).

Conservative healthcare services for aged people should aim to increase life quality, provide with independent living and prevent the initiation of disabled life. The Risk factors for dependence must be analyzed and ways to cope with them should be estimated as a core point for those services (1,3).

This study aims to describe daily routines of aged people staying at nursing homes or with families and to specify their feeling of loneliness.

## MATERIALS AND METHODS

The study has been carried out at Semiha Şakir Nursing Home and Rehabilitation Center for Aged People and Izzet Baysal Nursing Home, affiliated to the Provincial Directorate of Social Services as well as at Zeytinburnu Primary Health Care Center affiliated to the Ministry of Health, after having received the required permissions from related institutions.

Study universe comprised of old people staying at Izzet Baysal Nursing Home, Semiha Şakir Nursing Home and Rehabilitation Center for Aged People and those staying with families in Istanbul province during October 2010–April 2011. Study sampling comprised of 60 aged individuals staying at above mentioned nursing homes and 60 aged individuals staying with families in Istanbul.

Data collection instruments consisted of demographic data form based on the literature review done by researchers, the University of California Los Angeles Loneliness Scale (UCLA-LS) and Katz Daily Routines Index (GYA).

Data form based on literature review had been prepared by the researcher separately for individuals staying at nursing homes and for those staying with their families. The form for people at nursing homes included socio-demographic questions such as age, gender, marital status, etc. as well as information about illnesses, duration of stay at nursing home and their daily routines at nursing home. The form for aged people staying with their families included socio-demographic questions, information about illnesses, family member(s) with whom they stay and their everyday activities.

UCLA-LS, benefited for the study to determine loneliness levels of individuals, is a Likert-type four-item scale with 20 items, which were developed by Russell, Peplau and Ferguson (1978)(10). Ten statements are encoded in a linear way while others are versely encoded. The scale marks positive statements with 4-never experienced, 3-rarely experienced, 2-sometimes experienced, 1-often experienced whereas negative statements with 1-never experienced, 2-rarely experienced, 3-sometimes experienced, 4-often experienced. Maximum score can be 80 and minimum score can be 20 in this scale, which means that higher scores denote higher level of loneliness.

GYA Index, developed by Katz in 1979, is a popular scale both in Turkey and worldwide as its validity and reliability levels are high(11). GYA Index consists of 6 questions mentioning bathing, dressing, toilet, movement, excretion and nutrition. Carrying out daily activities independently is scored 3 points, taking help is scored 2 points, being unable to do is scored 1 point. For GYA Index, 0-6 points mean dependent, 7-12 points mean semi-dependent, 13-18 points mean independent.

The data have been analyzed via Statistical Package for the Social Sciences (SPSS) 16.0 program and frequency distributions, Chi-Square ( $\chi^2$ ), Student t test and one-way Anova test were used for analyses. The results were interpreted within 95% reliability at  $p < 0.05$  significance level.

## RESULTS

According to the study, 63.3% of aged people staying at nursing homes (n=38) are found to be 75 and older. Considering the similar factor for aged people living with their families, 70 % of that group (n=42) is found to be in the 65-74 age group. Group comparisons describing frequencies on percentages and p scores are displayed in Table 1.

**Table 1. Comparison of Sociodemographic Features of Aged People Staying at Nursing Homes and with Families**

Features		Aged People at Nursing Homes (n=60)		Aged People with Families (n=60)		X <sup>2</sup>	p
		n	%	n	%		
Age	65-74	22	36.7	42	70	14.886	0.002**
	75 and older	38	63.3	18	30		
Marital Status	Married	3	5	24	40	26.208	0.000***
	Divorced	6	10	5	8.3		
	Widow	49	81.7	25	41.7		
	Single (Never married)	2	3.3	6	10		
Gender	Female	28	46.7	33	55	0.834	0.361
	Male	32	53.3	27	45		
Number of Children	None	5	8.3	10	16.7	3.788	0.285
	1-2 child(ren)	18	30	22	36.7		
	3-4 children	23	38.4	15	25		
	5 and more	14	23.3	13	21.6		
Educational Background	Illiterate	6	10	11	18.3	6.037	0.303
	Literate	7	11.7	5	8.4		
	Primary school	23	38.3	17	28.3		
	Secondary school	3	5	9	15		
	High school	15	25	12	20		
	College	6	10	6	10		
Occupation	Housewife	17	28.3	15	25	3.523	0.172
	Retired	36	60	43	71.7		
	Inoccupied	7	11.7	2	3.3		
Social Security	Yes	36	60	53	88.3	12.570	0.000***
	No	24	40	7	11.7		
Income source	Retirement	38	63.3	51	85	19.404	0.000***
	pension	2	3.4	7	11.7		
	Family	20	33.3	2	3.3		
	Old-age pension						

\*p<0.05 \*\*p<0.01 \*\*\*p<0.001

Only 81.7% of aged people staying at nursing homes (n=49) are found to take their own personal care although none of them is found to clean the place they live in. All of the home residents however, are found to take their own personal care while 51.7% of that group staying with their families (n=31) clean the place they live in. 73.3% of nursing home residents (n=44) and 78.3% of old people staying with their families (n=47) are found to spend most of their free time by reading books and newspapers. 83.3 % of nursing home residents (n=50) and 100 % of those staying with their families are found to get involved in social activities. Group comparisons describing frequencies on percentages and p scores are displayed in Table 2.

**Table 2. Comparison of Daily Routines of Aged People Staying at Nursing Homes and with Families**

Features		Aged People at Nursing Homes (n=60)		Aged People with Families (n=60)		X <sup>2</sup>	P	
		n	%	n	%			
Every day activity	Personal care	Yes	49	81.7	100			
		No	11	18.3	-	-	12.110	0.001**
	Site cleaning	Yes	--	--	31	51.7		
		No	60	100	29	48.3	41.798	0.000***
Free time activity	Listening to the radio	Yes	23	38.3	12	20		
		No	37	61.7	48	80	4.881	0.027**
	Handicrafts	Yes	13	21.7	14	23.3		
		No	47	78.3	46	76.7	0.048	0.827
Reading books. newspapers	Yes	44	73.3	47	78.3			
	No	16	26.7	13	21.7	0.409	0.522	
Social activities	Has	50	83.3	60	100			
	None	10	16.7	-	-	10.909	0.001**	

\*\*p&lt;0.01 \*\*\* p&lt;0.001

68.3 % of aged people staying at nursing homes (n=35) and 41.7% of aged people staying with their families (n=25) are found to have a health problem limiting their movements. 63.3% of aged people at nursing homes (n=34) have a chronic disease and again 63.3% of them use drugs permanently (n=38). Concerning aged people living with their families, the frequency of chronic disease is 56.7% (n=34) and permanent use of drugs is 58.3% (n=35) (Table 3).

**Table 3. Comparison of Well-being of Aged People Staying at Nursing Homes and with Families**

Features		Aged People at Nursing Hoems (n=60)		Aged People with Families (n=60)		X <sup>2</sup>	P
		n	%	n	%		
Health problem causing immobilization	Yes	41	68.3	25	41.7		
	No	19	31.7	35	58.3	8.620	0.003***
Chronic diseases	Yes	38	63.3	34	56.7		
	No	22	36.7	26	43.3	0.556	0.456
Permanent drug use	Yes	38	63.3	35	58.3		
	No	22	36.7	25	41.7	0.315	0.575

\*\*p&lt;0.01

Mean scores of daily life activities of nursing home residents and old people living with their families are 16.27±1.53 and 17.02±1.24, respectively. Mean scores of loneliness for nursing home residents and those living with their families are 40.47±14.27 and 33.12±9.55, respectively. Group comparisons of mean scores of daily life activities and loneliness points show statistically very high significance (p<0.01) (Table 4).

**Table 4. Comparison of Daily Routine Index and Loneliness Scale Means of Aged People Staying at Nursing Homes and with Families**

Mean Scores for Scale Points	Aged People at Nursing Homes (n=60)		Aged People with Families (n=60)		T	p
	Mean	±SD	Mean	±SD		
Daily Routine Index	16.27	1.53	17.02	1.24	2.951	0.004**
UCLA-LS Loneliness Scale	40.47	14.27	33.12	9.55	3.316	0.001**

\*\*p&lt;0.01

The study shows that mean scores of UCLA-LS total loneliness points for people aged between 65-74 and for those over 75 are  $34.83 \pm 11.32$  and  $39.04 \pm 13.76$  respectively. Mean scores for old females and old males are  $37.67 \pm 13.49$  and  $35.92 \pm 11.75$  respectively. Mean scores of UCLA loneliness scale for never married old people with no children are found to be higher compared to other groups. Regarding educational background, mean score for UCLA-LS total loneliness points of literate participants is  $45.50 \pm 14.48$ , and unemployed participants is  $47.44 \pm 11.50$ . Mean score for UCLA-LS total loneliness points of aged people with social security is  $33.19 \pm 10.88$  and of those with no social security is  $47.12 \pm 11.74$  while mean score for aged people surviving through a retirement pension is  $49.14 \pm 11.29$  (Table 5).

**Table 5. Comparison of Demographic Features and Loneliness Points of Aged People**

Demographic Features	Total points for UCLA-LS Loneliness Scale				
		Mean	$\pm$ SD	f	p
Age	65-74	34.83	11.32	1.837	0.069
	75 and older	39.04	13.76		
Gender	Female	37.64	13.49	0.746	0.457
	Male	35.92	11.75		
Marital Status	Married	28.70	7.96	7.310	0.000***
	Divorced	32.45	12.24		
	Widow	39.54	12.72		
	Single (Never married)	44.63	12.18		
Number of Children	None	43.93	13.85	9.089	0.000***
	1-2 child(ren)	29.52	8.04		
	3-4 children	38.05	13.90		
	5 and more	41.81	10.82		
Educational Background	Illiterate	41.06	13.47	8.341	0.000***
	Literate	45.50	14.48		
	Primary school	41.55	11.55		
	Secondary school	29	7.43		
	High school	31.67	10.27		
Occupation	College	25.50	3.87	14.471	0.000***
	Inoccupied	47.44	11.50		
	Housewife	42.78	12.28		
Social Security	Retired	32.92	11.04	6.019	0.000***
	Yes	33.19	10.88		
Income Source	No	47.12	11.74	18.605	0.000***
	Retirement pension	33.31	10.68		
	Family	41	14.60		
	Old age pension	40.14	11.29		

## DISCUSSION

Daily routines and feeling of loneliness of aged people staying at nursing homes and those with families have been discussed in comparison with research findings.

63.3% of participants at nursing homes (n=38) are 75 and older whereas 70% of participants staying with families (n=42) are at 65-74 years of age ( $p < 0.01$ ) (Table 1). Aksüllü studied social support factors perceived by individuals staying at an institution or with his / her family as well as their depression levels. In that study, the majority of aged people staying at nursing homes were stated to be 70 and older (2). This study reveals that 53.3% of participants from nursing homes (n=32) are males whereas 55% of the participants staying with their families are females ( $p > 0.05$ ) (Table 1). Afşar's

study about “psychosocial comparison of aged people living within society and those staying at institutions” expressed that female frequencies were higher in both groups though there was no significant difference between two groups (12). The reason for the number of males staying at nursing homes is slightly higher might be due to (social) values related to the care of males and their unwillingness to live alone (13). Our study shows that 81.7% of aged people at nursing homes are widowed whereas 40% of aged people staying with their families are married ( $p < 0.001$ ) (Table 1). Afşar (1993) stated that 66.2% of home residents are married and 80.6% of institutional residents are divorced or their spouse had died. Frequency of widows was displayed as 52.4% in Demet et al.’s study and 69.1% by Bostancı and Yılmaz, respectively. These findings strengthen the assumption that living alone has an effect on the decision of staying at a nursing home (12-14). Aksüllü stated that 63.5% of nursing home residents were paid old age pension and 86% of home residents were paid retirement pension. Our study shows a similarity with Aksüllü’s results so that 85% of aged people at nursing homes get retirement pension while 33.3% of aged people living with families are getting old age pension in our study ( $p < 0.001$ ) (Table 1) (2).

The study shows that 81.7% of aged people at nursing homes ( $n=49$ ) are able to take their own personal care while all of the participants living with their families are able to do that ( $p < 0.01$ ) (Table 2). The fact that 68.3% of the nursing home residents have a health problem limiting their movements might create an obstacle for them to take their own personal care. It is also found out that none of the nursing home residents clean the place they live in ( $p < 0.001$ ) (Table 2). This might be due to the existence of cleaning personnel engaged to clean the residential areas at nursing homes. Mass media takes a great role in making aged people be informed about current issues around and enlivening their social relations while it could also become a way to avoid lack of social interest and loneliness.

Our study displays that 63.3% of the aged people staying at nursing homes have a chronic disease and 63.3% of them use drugs permanently ( $p > 0.05$ ) (Table 3). Tel et al. (2006) stated that 63% of old people at nursing homes have a chronic disease and 50% of them use drugs permanently (3). Those results are similar to the findings of our study. Orfila et al. remind that the reason for low quality of life for aged people is the existence of disease and chronic conditions (15).

Our study found that mean scores for UCLA-LS total loneliness points of aged people at nursing homes are higher than the mean scores of aged people staying with their families and ( $p < 0.01$ ) (Table 4). Tel et al.’s study about “everyday activities and feeling of loneliness of home resident and nursing home resident old people over 60 years of age” found that loneliness points of nursing home residents were higher than those of home residents (3). The study by J. Heun et al. done with a sample of 286 old individuals of 60 years of age or older who reside at nursing homes or with their families, explored that frequency of major depression was 14.3% and frequency of low, and repetitive short-span depression was 9.6% for nursing home residents. This finding strengthens the assumption that social relations of nursing home residents are weak, which strongly affects the development of depression (16,17). Jylhä also mentioned that nursing home residents felt lonelier than old people living at



home(18). The reason for nursing home residents to feel lonelier is assumed to be comparative to the implications of other studies such as the number of visitors, duration of staying lonely, providing social support and frequency of meeting other people (19,20).

There is no statistically significant difference between total loneliness points of aged people compared to age and gender ( $p>0.05$ ) (Table 5). According to the literature, loneliness can be felt in any age. Günaydın's study, which emphasizes there is no significant difference between age and loneliness level, confirms the findings of our research (21).

Comparison of total loneliness points of aged individuals regarding marital status shows statistically very high significance ( $p<0.001$ ) (Table 6). The reason for loneliness level of married old individuals being lower than the loneliness level of widowed and unmarried old people might be the mutual support of spouses at psychosocial level. Page referred that widowed, divorced and unmarried individuals felt lonelier than married ones. Barron et al. expressed a significant relation between marital status and loneliness level. Ünal and Bilge stated that old widowed people felt lonelier than old married people and marital status was effective on loneliness scale points (22-24). These studies have similar findings with our research.

Comparison of total loneliness points of aged individuals regarding gender statistically shows no significance ( $p>0.05$ ) (Table 5). Both groups feel lonely at medium level. Günaydın's study found no significant correlation between gender and loneliness level whereas Khorshid et al. revealed the effect of gender on loneliness level and males were lonelier than females. It is assumed that variation of loneliness depends on individual factors (21,25).

Comparison of total loneliness points of aged individuals regarding number of children shows statistical significance ( $p<0.001$ ) (Table 5). It is expected for old people with no children to have higher mean scores of loneliness points. Our study shows an increase on the mean scores of loneliness points with increasing number of children. This situation might be related to greater number of children increasing family conflicts thus causing higher cost of living.

According to the comparison of total loneliness points of aged individuals regarding educational background, there is statistically very high significance for the prediction that education level of aged individuals rise, feeling of loneliness decreases ( $p<0.001$ ) (Table 5). Kavlak and Saruhan's study indicated the effect of education on loneliness level and Dykstra's study emphasized that less educated people felt lonelier (26,27). Our research findings are similar to those mentioned studies. Since education positively influences economic, intellectual and socio-cultural level of individuals, they may participate more in social and cultural activities and find more hobbies.

Comparison of total loneliness points of aged individuals regarding occupation shows a statistical significance for the prediction that old, noccupied people and housewives feel lonelier than old retired people ( $p<0.001$ ) (Table 5). Kavlak and Saruhan found a negative correlation between income and loneliness level (26). Our findings are similar to the results of Kavlak and Saruhan's study.

Comparison of total loneliness points of aged individuals regarding social security shows a statistical significance ( $p<0.001$ ) (Table 5). Aged people with no social security feel lonelier than those having social security. Social security may provide with such freedoms including economic independence, participation in social activities and going shopping.

Comparison of total loneliness points of aged individuals regarding source of income shows a statistical significance ( $p<0.001$ ) (Table 5). Loneliness levels of aged people taking old-age pension and those financed by their family are higher than aged people taking retirement pensions. Our findings are similar to Creecy's statement which emphasizes that income directly influences loneliness (28).

As a result, services for old people should aim that they would be in contact with society at their home. The families should be encouraged that old people would be cared at home and opportunity should be provided to the families look after old people.

## REFERENCES

1. Fried LP, Tangen CM, Walston J, et al. Frailty in older adults: evidence for a phenotype. *J Gerontol A Biol Sci Med Sci.* 2001;56:146-156.
2. Aksüllü N, Doğan S. Huzurevinde ve evde yaşayan yaşlılarda algılanan sosyal destek etkenleri ile depresyon arasındaki ilişki. *Anadolu Psikiyatri Dergisi.* 2004;5:76-84.
3. Tel H, Sabancıoğulları S. Evde ve kurumda yaşayan 60 yaş ve üzeri bireylerin günlük yaşam aktivitelerini sürdürme ve yalnızlık yaşama durumu. *Türk Geriatri Dergisi.* 2006;9:34-40.
4. Kim O. Predictors of loneliness in elderly Korean immigrant women living in the United States of America. *J Ad Nurs.* 1999;29:1082-1088.
5. LeMura LM, Duvillard SP. *Clinical Exercise Physiology. Application and Physiological Principles.* 1st ed. Lippincott Williams&Wilkins;Philadelphia 2004:2-3.
6. McAuley E, Elavsky S, Motl RW, et al. Physical activity, self-efficacy, and self-esteem: Longitudinal relationships in older adults. *J Gerontol.* 2005;60:268-275.
7. Smith CM, Cotter VT. *Nursing standard of practice protocol: age-related changes in health.* New York: Hartford Institute for Geriatric Nursing; 2008.
8. Gillin JC, Ancoli-Israel S. The impact of age on sleep and sleep disorders. In: Salzman C, ed. *Clinical Geriatric Psychopharmacology.* 4th ed. Philadelphia: Lippincott Williams and Wilkins; 2005:483-512.
9. Christensen NP, Stein MB, Means-Christensen A. Social anxiety and interpersonal perception: a social relations model analysis. *Behav Res Ther.* 2003;44:1355-1371.
10. Demir A. UCLA yalnızlık ölçeğinin geçerlilik ve güvenilirliği. *Psikoloji Dergisi,* 1989;7:14-18.
11. Diker J, Etiler N, Yıldız M, Şeref B. Altmış beş yaş üzerindeki kişilerde bilişsel durumun günlük yaşam aktiviteleri, yaşam kalitesi ve demografik değişikliklerle ilişkisi. *Anadolu Psikiyatri Dergisi.* 2001;2:79-81.
12. Afşar OZ. Toplum içinde yaşayan ve kurumda kalan yaşlıların psikososyal yönden karşılaştırılması. Ankara Üniversitesi Halk Sağlığı Ana Bilim Dalı, Uzmanlık Tezi, Ankara, 1993.

13. Bahar A, Tutkun H, Sertbaş G. Huzurevinde yaşayan yaşlıların anksiyete ve depresyon düzeylerinin belirlenmesi. *Anadolu Psikiyatri Dergisi*. 2005;6:227-39.
14. Demet MM, Taşkın O, Deniz F, et al. Manisa huzurevlerinde kalan yaşlılarda depresyon belirtilerinin yaygınlığı ve ilişkili risk etkenleri. *Türk Psikiyatri Dergisi*. 2002;13:290-299.
15. Orfila F, Merrer M, Lamarca R, et al. Gender differences in health related quality of among the elderly. The role of objective functional capacity and chronic condition. *Soc Sci Med*. 2006;63:2367-2380.
16. Heun R, Papassotiropoulos A, Ptok U. Subthreshold depressive and anxiety disorders in the elderly. *Eur Psychiatry*. 2000;15:173-182.
17. Mccurren C, Dowe D, Rattle D, Looney S. Depression among nursing home elders: testing an intervention strategy. *Appl Nurs Res*. 1999;47:185-195.
18. Jylhä M. Old age and loneliness: cross-sectional and longitudinal analyses in the Tampere Longitudinal Study on Aging. *Can J Aging*. 2004;23:157-168.
19. Harris T, Cook DG, Victor C, et al. Predictors of depressive symptoms in older people--a survey of two general practice populations. *Age Ageing*. 2003;32:510-518.
20. Holmen K, Ericson K, Winbald B. Social and emotional loneliness among nondemented and demented elderly people. *Arch Gerontol Ger*. 2000;31:177-192.
21. Günaydın N. Yaşlı bireyler yalnızlığın incelenmesi. *Gülhane Askeri Tıp Akademisi Sağlık Bilimleri Enstitüsü Hemşirelik Yüksekokulu. Yüksek Lisans Tezi, Ankara, 1996.*
22. Barron CR, Foxall MJ, Dollen KV, et al. Marital status, social support and loneliness in visually impaired elderly people. *J Adv Nurs*. 1994;19:272-280.
23. Ünal G, Bilge A. İleri yaş grubunda yalnızlık, depresyon ve kognitif fonksiyonların incelenmesi. *Türk Geriatri Dergisi*. 2005;8:89-93.
24. Page RM, Cole GE. Demographic predictors of self-reported loneliness in adults. *Psychol Rep*. 1991;68: 939-945.
25. Khorshid L, Eşer İ, Zaybak A, et al. Huzurevinde kalan yaşlıların yalnızlık düzeylerinin incelenmesi. *Türk Geriatri Dergisi*. 2004;7:45-50.
26. Kavlak O, Saruhan A. İnfertil kadınlarda yalnızlık düzeyi ve bunu etkileyen faktörlerin incelenmesi. *Ege Tıp Dergisi*. 2002;41:229-232.
27. Dykstra PA, de Jong Gierveld J. Differential indicators of loneliness among elderly. The importance of type of partner relationship, partner history, health, socio-economic status and social relations. *Tijdschr Gerontol Geriatr*. 1999;30:212-225.
28. Creecy RF, Berg WE, Wright R. Loneliness among the elderly: a casual approach. *Geriatri Dergisi*. 1985;40:487-493.