

Original Article

The Relationship between Perceived Social Support and Depression in the Elderly Residing in a Nursing Home in Turkey

Hatice Tambag, PhD RN

Mustafa Kemal University Hatay School of Health Psychiatric Nursing Department, Antakya, Hatay, Turkey

Rana Can, PhD RN

Mustafa Kemal University Hatay School of Health Internal Diseases Nursing Department, Hatay, Turkey

Sevtap Mansuroglu, MSc Student RN

Mustafa Kemal University Health Sciences Institute, Hatay, Turkey

Sercan Mansuroglu, MSc RN

Mustafa Kemal University Health Sciences Institute, Hatay, Turkey

Gamze Yıldırım, MSc RN

Mustafa Kemal University Health Sciences Institute, Hatay, Turkey

Ebru Karakurt, MSc RN

Mustafa Kemal University Health Sciences Institute, Hatay, Turkey

Correspondence: Hatice Tambag, PhD RN, Mustafa Kemal University Hatay School of Health Psychiatric Nursing Department, 31060 Antakya, Hatay, Turkey e mail: htambag@hotmail.com, htambag@mku.edu.tr

Abstract

Background: Inadequacy of social support is large effect on the health. This is especially the elderly more common depression is important the prevention and maintaining mental well-being living in nursing home.

Aim: This study aimed to investigate the relationship between perceived social support of older people in a nursing home and depression.

Methods: A cross-sectional type study. The participants were 100 elderly who resided at a public nursing home in the East Mediterranean region of Turkey. The data was collected using the information recording form, Multidimensional Scale of Perceived Social Support (MSPSS), and the Geriatric Depression Scale (GDS). The data was analyzed for frequency, percentage, t-Test, Mann-Whitney U, Kuruskal Wallis, Conover Test, and Pearson's correlation.

Results: The mean score GDS 14.44 (± 6.99) and MSPSS 36.22 (± 17.30). The older people respondents' GDS and MSPSS scores were found to be impacted by the variables of gender, marital status, visitation status and participation in regular sport activities. A statistically significant relationship was found among GDS and MSPSS scales ($p < 0.05$).

Conclusion: Based on these findings researchers recommend that factors impacting depression and social support should be considered in planning services for the older people who reside in nursing homes.

Keywords: Ageing, depression, nursing home, social support.

Introduction

With the progression of improvements and breakthroughs in health technology and the field of health sciences, improvements in the control of contagious diseases, and the increased availability in preventive medicine and wellness services have prompted continual improvements

in health services, especially in developed countries. These advances have not only improved the quality of life but also increased the life expectancy of the receiving population. As a result of this increase in life expectancy, growth rates of the adult and elderly populations have been increasing across nations. In 2013, the elderly (aged ≥ 65 years) constituted 7.7% of the

whole population in Turkey. This rate is expected to increase to 10.2%, 20.8%, and 27.7% by 2023, 2050, and 2075, respectively, which in turn is estimated to place Turkey among countries with populations deemed “too old” (Turkish Statistical Institute 2013). In addition to these changes in the population composition, factors such as urban growth, changes in the work environment, and advances in technology have impacted the lifestyle of the elderly, thereby making it more difficult to take care of the elderly at home.

In the traditional Turkish family context, there is a tendency for the elderly to live with their family and children. However, recent changes toward the nuclear family model have resulted in an increased number of elderly living in nursing homes (Aksullu & Dogan, 2004; Altıparmak, 2009). Because of factors such as dependency on others for self-care, chronic physical illness, loss of autonomy, economic insufficiency, and isolation, the elderly in nursing homes might develop feelings of “worthlessness” and find themselves caught in negative emotions. With regard to mental health, elderly who are considered at risk face more severe issues in nursing homes. Moreover, the elderly living in nursing homes are starting to isolate themselves and participate less and less in community activities (Aksullu & Dogan, 2004; Altıparmak, 2009; Softa, Bayraktar & Uguz, 2016). Research in this field identified living in a nursing home to be one of the most important risk factors leading to isolation, feelings of worthlessness, and depression (Bahar, Tutkun, & Sertbas 2005; Top, Sarac, & Yasar, 2010). The existence of depression in the elderly causes loss of self-sufficiency and therefore creates the need for care and social support, which in turn decreases the quality of life.

Generally, social support is defined as physical and psychological assistance provided by family, friends, neighbors and/or institutions to an individual in hardship (Aksullu & Dogan, 2004; Altıparmak, 2009). Through its positive impact on the physical and psychological health of the individual, social support contributes to the emergence of positive feelings, such as prestige, motivation, satisfaction with life, and strength to overcome stressful events (Dow & Gaffey, 2015). Studies have indicated that the lack of social support in the elderly population increases depression risk (Chi & Chou, 2001; Chou & Chi, 2003; Koizumi et al., 2005; Pimentel, Afonso, &

Pereira, 2012; Choulagai, Sharma, & Choulagai, 2013; Patil et al., 2014; Garipey, Honkaniemi, & Quesnel-Vallee, 2016; Emaminaei et al., 2017; Patra et al., 2017; Sylvester & Tosin, 2017). To increase the quality of life in the elderly bound to live in nursing homes, services must be planned by adopting a holistic approach that considers their physical, psychological, and social wellbeing. There is a great need for studies that provide guidelines and recommendations for planning these services. Therefore, this study aims to investigate the relationship between perceived social support and depression in the elderly who reside in nursing homes.

Methods

Study Population and Design: This descriptive and cross-sectional study was conducted at a Nursing Home/Elderly Care Rehabilitation Center located in Hatay Province, Turkey. This public facility provides services through the Turkish Ministry of Family and Social Policy.

This study had access to a population of 168 elderly individuals who resided at the center. Although no sampling methodology was employed, we utilized a set of criteria for the selection of the participants. The criteria included residing in the nursing home section of the facility, volunteering to be a study participant, not having a hearing impairment that impedes communication, and not being identified as having any psychiatric disorder. On the basis of the criteria, 40 residents diagnosed with advanced dementia, five with hearing impairments, and three diagnosed with schizophrenia were excluded from the study. Data collection January 15 and 31 of 2015. Participants of the study consisted of 100 elderly individuals, 83% of the accessible population, who met the criteria for inclusion. The average age of the participants was 74.77 (SD=7.07), with 52% falling between the ages of 70 and 79 years. Moreover, 29% were female, 71% were male, 44% were primary school graduates, 31.1% had four or more children, 56% were widowed, 65% had social security benefits, 46% lived in a city before the nursing home, 50% had been living in a nursing home for 1–5 years, and 91% reported not having resided in another nursing home before this study. In addition, 61% reported that staying in the nursing home made them feel lonely, 50% reported having visitors, 61% reported not having a chronic illness, 84%

reported not having any physical disability, and 88% reported not exercising regularly.

For data collection, this study utilized an information recording form created to gather relevant sociodemographic characteristics, the Multi-dimensional Scale of Perceived Social Support (MSPSS), and the Geriatric Depression Scale (GDS).

The information recording form: This form contained 16 questions that were used to gather relevant sociodemographic information about the elderly residing at the center.

MSPSS: The MSPSS was developed by Zimmet et al. in 1988 as a 12 item subjective evaluation scale of social support, the validity and reliability study of the scale was conducted by Eker & Arkar in 1995. The scale is constructed as a seven-point Likert-type scale with three subsections that include three sources of support: family, friends, and significant other. Each source of support is represented by four items in the scale. Items 3, 4, 8, and 11 measure family support, items 6, 7, 9, and 12 measure support from a friend, and items 1, 2, 5, and 10 measure support from a significant other. A higher score obtained from this scale is indicative of a higher level of perceived social support. Cronbach's alpha values for internal validity were reported to be 0.95 for the family support subdimension, 0.94 for the friend support subdimension, and 0.91 for the significant other support subdimension. The Cronbach's alpha value for the total scale was 0.94 (Eker & Arkar, 1995). In the present study, Cronbach's alpha values were determined to be 0.95 for the family support subdimension, 0.94 for the friend support subdimension, and 0.90 for the significant other support subdimension. In addition, the validity value for the total scale was found to be 0.94.

GDS: The GDS was developed by Yesavage et al. in 1983 for the purpose of measuring depression in the elderly population. The reliability and validity study of the scale in the Turkish context was conducted by Ertan, Eker, & Sar in 1997, reporting a Cronbach's alpha value of 0.92. This scale, which constitutes 30 self-report questions, was designed for ease of completion by the elderly through marking answers or orally responding to yes or no questions. In the scale, items 3, 4, 5, 6, 8, 10, 11, 12, 13, 14, 16, 17, 18, 20, 22, 23, 24, 25, 26, and 28 are reverse scored. The scoring of the scale is such that each item indicative of depression is

given 1 point, whereas others are given 0 points, with the total number of points being accepted as the depression score. A total score of 0–10 points indicates “no depression”, 11–13 points “possible depression”, and 14 or more points “depression”. The possible range of scores for the scale is 1–30, the minimum being 1 and the maximum being 30 points (Ertan et al., 1997). In the present study, the Cronbach's alpha value for GDS was found to be 0.89.

Following approval (number: 2014.12.23/236) from the Mustafa Kemal University ethical board and permission from the Center, the study was conducted between January 15 and 31 of 2015. We obtained written informed consent from the participants and collected data through individual interviews using the information recording form, MSPSS, and GDS. Each interview took approximately 40 min.

Data Analysis: Data analysis was performed utilizing the Statistical Package for the Social Sciences (SPSS) 21.0 version. The Kolmorov–Semirnov test was used to examine the scale and subscale distribution, which was determined to be a normal. Parametric tests were utilized during data analysis. Demographic characteristics of the participants are reported in a frequency table. Statistical analysis of the data was conducted using independent-samples t-Test, Mann-Whitney U, Kuruskal Wallis, Connover Test, and Pearson's correlation coefficient; p values of <0.05 were considered statistically significant.

This study was limited to (a) the participants residing at the Nursing Home/Rehabilitation Center in Hatay Province, Turkey in January of 2015 and (b) the self-reporting of the study participants.

Results

The elderly participants' mean scores were found to be 14.44 ($SD=6.99$) for the overall GDS, 36.22 ($SD=17.30$) for the total MSPSS score, 11.40 ($SD=7.21$) for the family support subscale, 13.30 ($SD=6.82$) for the friend support subscale, and 11.52 ($SD=6.17$) for the significant other support subscale (Table 1).

An examination of mean GDS and MSPSS scores by demographic characteristics revealed that males had a higher mean GDS score (15.54 ($SD= 6.92$)) than females, the difference being statistically significant ($p < 0.05$, Table 2). Concerning marital status, the total MSPSS score

and the significant other support subscale scores were found to be different. Further analysis using Conover test identified the difference to be statistically significant for the variables “divorced” and “widowed” ($p < 0.05$, Table 2). Participants who reported having visitors had significantly higher total scores on MSPSS,

family support, and significant other subscales than those who were not visited ($p < 0.05$, Table 2). In addition, total MSPSS scores and mean scores of the friend support subscale were found to be significantly higher in those who reported to be exercising regularly than in those who reported otherwise ($p < 0.05$, Table 2).

Table 1. The Mean Scores of MSPSS and GDS for Elderly in Nursing Home

Scales	$\bar{X} \pm SD$	Min - Max
Multidimensional Scale of Perceived Social Support (MSPSS) Subscale		
Family support	11.40±7.21	4-28
Friend support	13.30±6.82	4-28
Significant other support	11.52±6.17	4-27
MSPSS total	36.22±17.30	12-80
Geriatric Depression Scale (GDS)	14.44±6.99	1-30

r= Pearson's correlation, * $p < 0.01$.

Table.2. Mean Scores on GDS and MSPSS Based on Demographic Characteristics of Elderly in Nursing Homes

Demographic Characteristics	MSPSS			Total $\bar{X} \pm SD$	GDS Total $\bar{X} \pm SD$
	Family support $\bar{X} \pm SD$	Friend support $\bar{X} \pm SD$	Significant other support $\bar{X} \pm SD$		
Gender					
Female	12.44±9.60	14.79±9.11	13.13±7.80	40.37±22.02	11.72±6.52
Male	10.97±6.00	12.69±5.60	10.85±5.28	34.52±14.81	15.54±6.92
	t= 0.928 p= 0.356	t= 1.405 p= 0.163	t= 1.691 p= 0.094	t= 1.547 p= 0.094	t= -2.548 p= 0.012
Marital status					
Married	8.50±5.85	10.58±5.64	7.33±3.62	26.41±11.42	10.58±5.64
Single	10.50±6.09	9.90±5.38	8.90±4.20	29.30±15.10	9.90±5.38
Widowed	11.39±7.81	13.91±7.41	12.08±6.83	37.39±18.36	13.91±7.41
Divorced	13.40±6.47	14.77±5.78	13.54±4.92	41.72±15.79	14.77±5.78
	X ² = 4.494 P= 0.213	X ² = 5.925 P= 0.115	X ² = 10.593 P= 0.014	X ² = 7.725 P= 0.045	X ² =3.790 P= 0.285
Reported having visitors					
Yes	13.86±7.63	14.06±7.10	13.04±6.42	40.96±18.14	15.04±7.20
No	8.94±5.87	12.54±6.51	10.00±5.57	31.48±15.17	13.84±6.80
	t= 3.612 p= 0.001	t= 1.115 p= 0.268	t= 2.528 p= 0.013	t= 2.835 p= 0.006	t= 0.856 p= 0.394
Reported exercising regularly					
Yes	13.91±6.28	18.41±3.02	14.58±5.33	46.91±11.82	18.16±6.58
No	11.05±7.29	12.60±6.91	11.10±6.18	34.76±17.47	13.93±6.93
	Z= -1.657 p= 0.097	Z= -3.071 p= 0.002	Z= 1.989 p= 0.057	Z= -2.574 p= 0.010	Z= -1.821 p= 0.069

t= Independent Sample t Test, X² = Kuruskal Wallis, Z= Mann-Whitney U

Table 3. Relationship Between Multi-Dimensional Scale of Perceived Social Support and Geriatric Depression Scale of the Elderly

GDS and MSPSS	GDS and MSPSS				
	GDS	Family support	Friend support	Significant other support	MSPSS Total
	r	1			
GDS	p				
Family support	r	-0.808	1		
	p	0.001*			
Friend support	r	-0.852	0.437	1	
	p	0.001*	0.001*		
Significant other support	r	-0.917	0.613	0.773	1
	p	0.001*	0.001*	0.001*	
MSPSS Total	r	-0.353	0.337	0.266	0.302
	p	0.001*	0.001*	0.007*	0.002*

Investigating possible correlations between participants' GDS and total MSPSS and subscale scores revealed a strong negative correlation between GDS score and family support ($r = -0.808$; $p = 0.001$), as well as support from a friend ($r = -0.852$; $p = 0.001$), a very strong negative correlation between GDS and support from a significant other ($r = -0.917$; $p = 0.001$), and a weak negative correlation between GDS and total MSPSS score ($r = 0.353$; $p = 0.001$) (Table 3).

Discussion

Although the participants' mean GDS score was 14.44 ($SD=6.99$), 52% had a GDS score of ≥ 14 . A review of studies conducted at nursing homes both abroad and in Turkey showed that the elderly had GDS scores >14 and were identified as being depressed (Bekaroglu et al. 1991; Aksullu & Dogan, 2004; Bahar et al. 2005; Top et al. 2010; Pimentel et al. 2012; Choulagai et al. 2013). In a study conducted at a military nursing home, Top et al. (2010) reported a mean GDS score of 15.56 ($SD=5.065$). Similarly, in a study conducted in Samsun Nursing Home, Altay and Avcı (2009) reported a mean GDS score of 15.12 ($SD=5.42$) in the elderly. A study conducted in Trabzon, Turkey compared GDS scores of the elderly over 60 who live at home to those who reside in a nursing home. It reported a 35%

depression rate in the general population compared to the 41% in those living in nursing homes (Bekaroglu et al., 1991). Another similar study including 71 elderly participants residing in a nursing home in Gaziantep, Turkey reported depression prevalence to be 76% (Bahar et al., 2005). A study by Aksullu & Dogan (2004) found the same to be 68.9%. Choulagai et al. (2013) reported depression prevalence in nursing homes to be 51.3%, whereas Pimentel et al. (2012) determined depression prevalence to be 73.5% in Portugal.

In our study, the mean scores were 36.22 ($SD=17.30$) for MSPSS, 11.40 ($SD=7.21$) for the family support subscale, 13.30 ($SD=6.82$) for the friend support subscale, and 11.52 ($SD=6.17$) for the significant other support subscale (Table 1). Aksullu & Dogan (2004) reported mean scores of 26.28 for total MSPSS, 7.35 for family support, 11.02 for friend support, and 7.94 for the significant other subscale. A comparison of the findings showed that studies concerning the elderly in nursing homes both abroad and in Turkey reported similar findings (Altıparmak, 2009). Living in nursing homes and lack of social support from family and others might impact the possibility of depression and could thereby lead to feelings of depression in the elderly.

A comparison between the participants' mean GDS and MSPSS scores by demographic characteristics showed that male participants had higher mean GDS scores (15.54, $SD=6.92$), the difference being statistically significant ($p < 0.05$, Table 2). Contrary to our findings, reported higher depression scores in females than in males (Top et al., 2010). However, many studies reported an important correlation between depression and social support, demonstrating that increased social support decreased depressive symptoms (Chi & Chou, 2001; Chou & Chi, 2003; Aksullu & Dogan, 2004; Koizumi et al., 2005; Altıparmak, 2009; Pimentel et al., 2012; Choulagai et al., 2013). In our study, females had a higher mean MSPSS scores (40.37, $SD=22.02$) than males (34.52, $SD=14.81$). The higher mean GDS scores for male participants might be the result of low social support.

A comparison between the total MSPSS score and the significant other subscale scores by marital status revealed that those who were divorced and widowed had significantly higher scores ($p < 0.05$, Table 2). This finding was similar to those reported in previous studies (Altıparmak, 2009; Wang & Zhao, 2012). In our study, the elderly who were visited had significantly higher total scores on MSPSS, family support, and significant other subscales than those who were not ($p < 0.05$; Table 2). Buker, Altug, Kavlak, & Kitis (2010) stated that social support from the spouse, family, and friends had a positive impact on both physical and psychological health of the elderly and contributes to the existence and growth of positive feelings, such as a positive outlook and satisfaction with life. In our study, we found that those who had visitors knew that they had individuals who could support them when needed, which in turn positively impacted their perception of social support.

In addition, those who reported to be exercising regularly were found have significantly higher total MSPSS scores and mean scores on the friend support subscale than those who reported otherwise ($p < 0.05$, Table 2). This finding was in agreement with those reported in similar studies (Su et al. 2012; Chang, Chien, & Chen, 2016). Buker et al. (2010) investigated the level of morale and depression of those who reside both at home and in nursing homes and the impact it had on functional condition. They concluded that to prevent the existence of possible loss of physical function in nursing homes, to increase

the level of morale, and to decrease depression symptoms, it is crucial that the elderly are assisted in gaining the habit of regular exercise and planning recreational activities.

After reviewing the correlation between GDS, MSPSS, and subscales, we determined the existence of a strong negative correlation (Table 3). A large body of research identified an important relationship between depression and social support, while further stating that depressive symptoms decrease as social support increases (Chi & Chou, 2001; Chou & Chi 2003; Aksullu & Dogan, 2004; Koizumi et al., 2005; Altıparmak, 2009; Pimentel et al., 2012; Su et al., 2012; Wang & Zhao 2012; Patil et al., 2014; Faramarzi et al., 2015; Garipey et al., 2016). These findings support the notion that social support is a crucial factor in the development and maintenance of psychosocial wellness in the elderly.

Conclusion

This study was conducted to investigate the association between perceived social support and depression in the elderly residing in a nursing home. The findings of the study suggest that perceived social support was higher in those who exercised regularly than in those who did not, those who were visited than in those who were not, and those who were divorced/had a deceased spouse than in those who were single. Moreover, males expressed higher levels of depressive symptoms than females, whereas a negative correlation existed between social support and depression scores. In other words, it was identified that depression decreases as social support increases. The implications of this study are noted as recommendations for health professionals serving the elderly population. More specifically, the researchers recommend providing education and training on important issues, such as the aging process, risk factors impacting depressive symptoms, and mental health in the aging population. In addition, they emphasize the importance of prioritizing the evaluation of mental health in the elderly residing in nursing homes who do not get visited, as well as increasing institutional support services.

References

- Aksullu, N., & Dogan, S. (2004). Relationship of social support and depression in institutionalized and non-institutionalized elderly. *Anatolian Journal of Psychiatry* 5(2): 76-84 (inTurkish).

- <http://psikiyatridizini.net/viewarticle.aspx?articleid=355&tammetinvar=yes>
- Altay, B., & Avcı, A.I. (2009). Relationship between selected characteristics and depression risk among elderly living in the nursing home, samsun. *Turkish Journal of Geriatrics*, 12(3): 148-153. (inTurkish).
<http://geriatri.dergisi.org/content.php?id=84>
- Altıparmak, S. (2009). The levels of life satisfaction, social support and factors affecting these in elderly people living at nursing homes. *Firat University Medical Journal of Health Sciences*, 23(3): 159-164. (inTurkish).
<http://tip.fusabil.org/content.php3?id=49>
- Bahar, A., Tutkun, H., & Serbas, G. (2005). The determination of the level of anxiety and depression of old people who live in the nursing home. *Anatolian Journal of Psychiatry*, 6(4): 227-239 (inTurkish).
- Bekaroglu, M., Uluotku, N., Tanrıöver, S., & Kırpınar, İ. (1991). Depression in an elderly population in Turkey. *Acta Psychiatrica Scandinavica*, 84(2): 174-178.
- Buker, N., Altug, F., Kavlak, E., & Kitis, A. (2010). Investigation of the effects of morale status and depression level on functional status in aged people living at home and community. *Elderly Issues Research Journal*, 1(1): 44-53. (inTurkish).
<http://dergipark.gov.tr/yasad/issue/21795>
- Chang, S. H., Chien, N. H., & Chen, M. C. (2016). Regular exercise and depressive symptoms in community-dwelling elders in Northern Taiwan. *The Journal of Nursing Research*, 24(4): 329-336.
- Chi, I., & Chou, K.L. (2001) Social support and depression among elderly Chinese people in Hong Kong. *International Journal of Aging and Human Development*, 52(3): 231-252. (PMID: 11407488,
- Chou, K.L., & Chi, I. (2003). Reciprocal relationship between social support and depressive symptoms among Chinese elderly. *Aging & Mental Health*, 7(3): 224-231 (PMID: 12775405
- Choulagai, P.S., Sharma, C.K., & Choulagai, B.P. (2013). Prevalence and associated factors of depression among elderly population living in geriatric homes in Kathmandu Valley. *Journal of Institute of Medicine*, 35(1): 39-44.
- Dow, B., & Gaffey, E. (2015). Mental health and well-being in older people. *Australasian Journal on Ageing*, 34: 220–223. (PMID: 26643229, <https://doi.org/10.1111/ajag.12291>)
- Eker, D., & Arkar, H. (1995). Factorial structure, validity, and reliability of the multidimensional scale of perceived social support. *Turkish Journal of Psychology*, 10: 17-25. (inTurkish).
- Emaminaei, M., Bakhtiyari, M., Hatami, H., Khodakarim, S. & Sahaf, R. (2017). Depression and perceived social support in the elderly. *Iranian Journal of Ageing*, 12(2): 192-207.
- Ertan, T., Eker, E., & Sar, V. (1997). Validity and reliability of the geriatric depression scale in Turkish elderly population. *Archives of Neuropsychiatry*, 34(1): 62-71 (inTurkish).
- Faramarzi, M., Hosseini, S.R., Cumming, R.G., Kheirkhah, F., Parsaei, F., Ghasemi, N., & Bijani, A. (2015). A negative association between social support and depression in the elderly population of Amirkola City. *British Journal of Medicine & Medical Research*, 8(8): 707-716.
- Garipey, G., Honkaniemi, H., & Quesnel-Vallee, A. (2016). Social support and protection from depression: systematic review of current findings in Western countries. *The British Journal of Psychiatry*, 209(4): 284–293.
- Koizumi, Y., Awata, S., Kuriyama, S., Ohmori, K., Hozawa, A., Seki, T., & Tsuji, I. (2005). Association between social support and depression status in the elderly: Results of a 1-year community-based prospective cohort study in Japan. *Psychiatry and Clinical Neurosciences*, 59(5): 563-569. (PMID: 16194259,
- Patil, B., Shetty, N., Subramanyam, A., Shah, H., Kamath, R., & Pinto, C. (2014). Study of perceived and received social support in elderly depressed patients. *Journal of Geriatric Mental Health*, 1(1):28-31.
- Patra, P., Alikari, V., Fradelos, EC., Sachlas, A., Kourakos, M., Rojas Gil, AP., Babatsikou, F., & Zyga, S. (2017). Assessment of Depression in Elderly. Is Perceived Social Support Related? A Nursing Home Study. *Advances in Experimental Medicine and Biology*, 987:139-150.
- Pimentel, A.F., Afonso, R. M., & Pereira, H. (2012). Depression and social support in old age. *Psicologia. Saúde e Doenças*, 13(2): 311-327. , C. (2016). Elders' Perceived Social Support Systems and Factors Effecting Their Healthy Life-Style Behaviour. *Elderly Issues Research Journal*, 9(June):1-12.
<http://dergipark.ulakbim.gov.tr/yasad/article/view/5000144780/5000168142>
- Su, D., Wu, X.N., Zhang, Y.X., Li, H.P., Wang, W.L., Zhang, J.P., & Zhou, L.S. (2012). Depression and social support between China rural and urban empty-nest elderly. *Archives of Gerontology and Geriatrics*, 55(3): 564-569. (
- Sylvester, OA., & Tosin, A.O. (2017). Influence of Coping Strategies and Perceived Social Support on Depression among Elderly People in Kajola Local Government Area of Oyo State, Nigeria *International Journal of Clinical Psychiatry*, 5(1):1-9.
- Top, F.U., Sarac, A., & Yasar, G. (2010). Depression, death anxiety and daily life functioning in the elderly living in nursing home. *Turkish Journal of Clinical Psychiatry*, 13(1): 14-22. (inTurkish).
<http://www.klinikpsikiyatri.org/en/jvi.aspx?pdire=kd&plng=eng&volume=13&issue=1>
- Turkish Statistical Institute. (2013). Elderly with Statistics, Ankara, Turkey. [Internet] Available from: <http://www.tuik.gov.tr>

- <http://www.turkstat.gov.tr>. Accessed: August 16, 2015.
- Wang, J., & Zhao, X. (2012). Family functioning and social support for older patients with depression in an urban area of Shanghai, China. *Archives of Gerontology and Geriatrics*, 55(3): 574-579.
- Yesavage, J.A., Brink, T.L., Rose, T.L., Lum, O., Huang, V., Adey, M., & Leirer, V.O. (1983). Development and validation of a geriatric depression screening scale: a preliminary report. *Journal of Psychiatric Research*, 17(1): 37-49.