

## Original Article

# Attitudes of Nursing Students about Ageism and the Related Factors

**Gokce Demir, PhD**

Assist. Prof. Dr. Ahi Evran University Health School Nursing Department, Kırşehir, Turkey

**Sevil Bicer, PhD**

Assist. Prof. Dr. Erciyes University Faculty of Health Sciences Public Health Nursing Department, Kayseri, Turkey

**G.Deniz Bulucu-Böyüksoy,**

Res. Assist. Ahi Evran University Health School Nursing Department, Kırşehir, Turkey

**Betül Özen, PhD**

Assist. Prof. Dr. Erciyes University Faculty of Health Sciences Public Health Nursing Department, Kayseri, Turkey

**Correspondence:** Gokce Demir, Assist. Prof. Dr. Ahi Evran University Health School Nursing Department, Kırşehir, Turkey e-mail: gokce\_4068@hotmail.com

### Abstract

**Background:** At the end of the twentieth century, life expectancy increased. Therefore, approach to elderly people started to become important.

**Aims:** The study is carried out to determine the attitudes of students about ageism and the relationship of these attitudes with some variables.

**Methodology:** This descriptive type of research is carried out on 293 students studying in nursing department of health high school between October-November 2013 and agreeing to take part in the research.

**Results:** The point average of nursing students' Ageism Attitude Scale (AAS) is  $79.49 \pm 9.04$  and it has been found out that the positive discrimination points towards the elderly.

**Conclusions:** It has been found out that the nursing students have positive attitudes towards ageism.

**Key words:** Ageism, Elderly, Nursing student

### Introduction

At the end of the twentieth century, life expectancy increased and birth rates decreased considerably, especially in developed countries (TSI, 2013). Thus, the rate of elderly individuals in the population is continuously increasing both in Turkey and worldwide (Usta et.al., 2012). While 10% of the whole population of the world is comprised of the population aged 65 and older, it has been expected that this rate will be higher than 10.4% in 2025 and 16% in 2050 (UN, 2011). On the other hand, despite the fact that in Turkey while the old people aged 65 and older consist of 7.7% of Turkey population, in 2013, it has been expected that it will increase up to 10.2% in 2023, 20.8% in 2050, and 27.7% in 2075 (TSI, 2013).

Nowadays the increasing rate of population aged 65 and older within the whole population both

among in the world and in our country raises the question of old discrimination (Yilmaz et. al., 2012).

The definition of "ageism" was first used in 1969 by Gerontologist Robert Butler, the National Old Institute President. Butler described ageism as the discrimination towards elderly as an active definition like race discrimination and gender discrimination (Butler, 1980). Ageism is defined as a multidimensional concept including different attitudes, biases, behaviors and actions towards an old person just because he/she is old (Ron, 2007, Unalan, Soyuer and Elmali, 2012). Ageism is generally based on conceptualization of the age chronologically. Therefore, it is also defined as interpreting the inadequacies, limits and negative changes that occur as getting older (Butler, 1980). Palmore, the author of the most famous definition, describes ageism as any

prejudice or discrimination in favor or against a certain age group (Palmore, 1999). Prejudices are negative stereotypes or negative attitudes towards a certain age group based on these stereotypes. Discrimination is inappropriate behavior towards a member of a certain age group (Butler, 1980).

There have been researches carried out to determine the views and attitudes of both old people and the society towards ageism (Yilmaz et. al, 2012, Unalan, Soyuer and Elmali, 2012, Walker et. al., 2007, Ogeler et. al., 2012). In the literature it is emphasized that the areas where discrimination towards elderly is seen mostly are working area, family life, social life, sex life and health care systems. Moreover, it is stated that old people are exposed to discrimination depending on the process of the physical, intellectual and psychological changes occurring as getting older (Soyuer et. al., 2010).

Some studies, carried out both at home and abroad in order to identify the attitudes of nursing students towards old age and old people, it is found out that the students have positive attitudes (Uysal et. al., 2014, Ehrlich, Burton and Greenberg, 2003, McKinlay and Cowan, 2003, Guven, Ucakan-Muz and Efe-Erturk, 2012). In contrast, some other studies suggested that they have negative attitudes towards old people (Zhou, 2007, Mosher- Asley and Ball, 1999, Laditka et. al., 2004). Moreover, it is also proposed that students' attitudes have changed positively after gerontology training or clinical experience (Adibelli, Turkoglu and Kilic, 2013).

The perception, perspective and bias towards old age of the society and professionals affect the quality of services offered to the elderly. The perception of old age either directly or indirectly has effects on setting the priorities for offering health services, putting protective health services into practice effectively, old people's health services, opportunities specializing healthcare staffs in the area elderly health and the problems faced during effectively implementing the policy about old age (Ozdemir and Bilgili, 2014).

Elderly care requires an interdisciplinary team approach and nurses have an undeniable place and importance in this team. As today's nursing students are tomorrow's care staffs, their positive attitudes towards old age and old people will have effects on the quality of services they will give (Adibelli, Turkoglu and Kilic, 2013).

Nursing curriculum and nursing education institutions may have a vital role in nursing students' developing positive attitudes towards ageing despite that their setting positive attitudes while taking care of the elderly and having enough knowledge about the old age period is of great importance at this point (Kulakci, 2010). This study was conducted to determine the attitudes of nursing students about ageism and related factors.

### Methodology

The descriptive study was carried out in the Nursing Department of Health School of a state university in the Central Anatolian Region of Turkey between October-November 2013. The population of the research is comprised of 570 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> grade students studying in the nurse department of Health School in 2013-2014 academic years. The method of selecting the sample hasn't been applied in the research and it has been aimed to reach the whole population. However, only 293 students were included in the research because of the reasons such as refusing to take part in the research, not coming to the school on the date when the research implemented. Before the research, a written permission from the Directorate of Health School, and a verbal consent from the students were obtained. Research ethical approval was also received from the Ethics Committee of Ahi Evran University.

As data collection tool, a personal information form and Ageism Attitude Scale (ASS) were utilized as the data collection tool. In the form, there were questions about the students' socio-demographic features and the thoughts of the students on living with an old/the old people. ASS is a five point likert scale with 23 items whose validity and reliability is checked, with the selections "Strongly Disagree", "Disagree", "Undecided", "Agree", "Strongly Agree" and developed by Yilmaz-Vefikulucay (Yilmaz-Vefikulucay, 2011). Cronbach's alpha reliability coefficient of the scale is found out as 0.80. There are positive and negative attitude statements in the scale. Positive attitude statements are graded as 5= Strongly Agree, 4= Agree, 3= Undecided, 2= Disagree, 1= Strongly Disagree. The negative attitude statements towards old discrimination on the other hand are graded vice versa. The maximum score that can be obtained from the scale is "115", minimum

score is “23”. As the score obtained from the scale increases the positive attitudes towards the old discrimination increases as well. ASS is comprised of three dimensions. These are:

1. Restriction of elderly: The attitude and perception of the society about restricting the old’s social life. The maximum score that can be obtained from this dimension is “45” and minimum score is “9”.

2. Positive Discrimination towards elderly: The positive attitude belief and perception of the society towards the old person. The maximum score that can be obtained from this dimension is “40” and minimum score is “8”.

3. Negative Discrimination towards elderly: The negative attitude belief and perception of the society towards the old person. The maximum score that can be obtained from this dimension is “30” and minimum score is “6” (Yilmaz-Vefikulucay, 2011).

Data collection forms were given to the vocational health school nursery department students while they were in the classroom before the lecture started and they were collected after filling out. The data were evaluated in computer environment. Shapiro-Wilk was utilized for the normality test of the data. As the variables did not have a normal distribution Mann Whitney U Test in the two group comparisons and Kruskal Wallis Variance Analysis Test in comparisons of three or more groups were utilized. P values of  $<0.05$  were considered statistically significant. Mann Whitney U Test, Kruskal Wallis Variance Analysis test were used to make group comparisons on the scores of limitation of elderly life, positive discrimination towards elderly and negative discrimination towards elderly as they did not have normal distribution. Since the sum of scale of elderly discrimination manner had normal distribution, f and t test were used to compare the groups.

## Results

In the study, it was determined that 75.4% of the students were female, 61.8% of them were aged 20 and below, 29.0% of them were 1<sup>st</sup> grade, 54.6% of them were graduated from regular high school, 64.8% of them were coming to university from the city center, 89.8% of them belong to an elementary family and 67.9% of them had equal income and expenditures (Table 2). The point distribution of the students’ ASS total and sub-

dimensions and maximum-minimum scores are seen in Table 1. The maximum score that students can obtain from the ASS is “115”. This score shows the student has positive attitudes towards the ageism. The minimum score that students can obtain from the ASS is “23”. This score shows the student has negative attitudes towards ageism. In the research it has been found out that the total point averages of the students’ ASS is  $79.49 \pm 9.04$ , the minimum score obtained from ASS is “43” and maximum score is “84”. This result obtained from this research shows that the students have positive attitudes towards ageism (Table 1).

When the relationship of the point averages of ASS total and sub-dimensions with the independent variables about the students’ features of socio-demographic are analyzed, the positive scores towards ageism and ASS total scores of the students belong to an elementary family have been found significantly high compared to the students belong to an extended family ( $p < 0.05$ ) (Table 3). It has been found out that there is a statistical meaning between the classes in which students are studying and ASS total scores ( $p < 0.05$ ) (Table 3). The difference between the point averages of ASS total and sub-dimensions hasn’t been found meaningful in terms of the gender of the students, age groups, previous school they graduated, their hometowns and family income status ( $p > 0.05$ ) (Table 3).

ASS total scores and positive discrimination towards elderly sub-dimension scores of the students who are willing to live with their family in the future are meaningfully high compared to scores of those who are not willing to live with their family in the future ( $p < 0.05$ ) (Table 4). Positive discrimination towards the old sub-dimension scores of the students who want to work with an elder after graduation are meaningfully high compared to those who don’t want to work with an elder after graduation ( $p < 0.05$ ) (Table 4).

The difference between the point averages of ASS total and sub-dimensions hasn’t been found meaningful in terms of the students’ living with an old/old people, the period of students’ living with an old/old people in the same house and the status of nursing old people during clinical practices ( $p > 0.05$ ) (Table 4).

**Table 1: The point distribution of the students' ageism attitude scale (ASS) total and sub-dimensions**

<b>The Dimensions of Ageism Attitude Scale and Total Score</b>	<i>Median (min-max)</i>
Restriction of elderly	33(15-79)
Positive discrimination towards elderly	30(8-40)
Negative discrimination towards elderly	17(3-34)
	$\bar{X} \pm SS$ (min-max)
ASS Total Score	79.49±9.04 (23-115)

**Table 2: Descriptive features of the student participants**

<b>Descriptive features</b>	<b>n</b>	<b>(%)</b>
<b>Gender</b>		
Female	221	75.4
Male	72	24.6
<b>Level of class</b>		
1st grade	85	29.0
2nd grade	73	24.9
3rd grade	77	26.3
4th grade	58	19.8
<b>The last school graduated</b>		
Regular High School	160	54.6
Anatolian-Super- Science	113	38.6
Health High School	9	3.1
Vocational High School	11	3.8
<b>Where they came from</b>		
Province	190	64.8
District	83	28.3
Village/Town	20	6.8
<b>Family Feature</b>		
Elementary Family	263	89.8
Extended Family	30	10.2
<b>Family Income Status</b>		
Income is more than expense	30	10.2
Income is equal to expense	199	67.9
Income is less than expense	64	21.8

**Table 3: The point distribution of the ageism attitude scale (ass) total and sub-dimensions in terms of the students' descriptive features**

Variables	n (%)	Restriction of the elderly	Positive Discrimination towards elderly	Negative Discrimination towards elderly	ASS Total Score
<b>Gender</b>					
Female	221(75.4)	33 (15-79)	30 (12-40)	17 (3-34)	79.86±8.76
Male	72 (24.6)	33 (17-45)	31 (8-40)	17 (11-26)	78.33±9.84
Statistic		U:7435.00 p=.403	U:7555.50 p=.520	U:7503.50 p=.467	t: 1.25 p=.212
<b>Age group</b>					
Aged 20 and below	181(61.8)	33 (15-72)	31 (8-40)	17 (3-34)	79.66±8.80
Aged 20 and above	112(38.2)	33 (20-79)	30 (9-40)	17 (10-28)	79.20±9.45
Statistic		U:9961.00 p=.803	U:9308.50 p=.239	U:9029.50 p=.115	t: 0.42 p=.671
<b>Level of class</b>					
1st grade	85 (29.0)	34 (22-40)	31 (21-39)	17 (8-25)	81.23±7.61
2nd grade	73(24.9)	33 (15-72)	30 (8-40)	17 (3-26)	77.73±9.36
3rd grade	77(26.3)	32 (17-79)	30 (13-40)	18 (10-34)	78.09±1.05
4th grade	58(19.8)	33 (20-40)	31 (12-40)	17 (10-28)	81.00±7.78
Statistic		KW:7.18 p=.066	KW:6.72 p=.081	KW:5.32 p=.150	F: 3.18 p=.024
<b>The last school graduated</b>					
Regular High School	160(54.6)	33 (15-79)	30 (9-40)	17 (8-28)	78.81±9.21
Anatolian-Super- Science	113(38.6)	33 (17-72)	31 (8-40)	17 (9-34)	80.00±8.96
Health High School	9 (3.1)	35 (25-37)	32 (18-39)	17 (10-21)	80.66±8.73
Vocational High School	11(3.8)	36 (27-39)	30 (26-40)	17 (3-20)	83.09±7.18
Statistic		KW:4.02 p=.259	KW:1.62 p=.654	KW:0.32 p=.956	F: 1.05 p=.368
<b>Where they came from</b>					
Province	190(64.8)	33 (15-79)	30 (8-40)	17 (3-34)	79.33±8.95
District	83 (28.3)	34 (15-41)	30 (9-40)	17 (10-24)	79.71±8.35
Village/Town	20 (6.8)	33 (17-40)	31 (12-38)	18,5 (10-24)	80.05±1.25
Statistic		KW:1.17 p=.556	KW:0.27 p=.873	KW:3.13 p=.209	F:0.09 p=.914
<b>Family Feature</b>					
Elementary Family	263(89.8)	33 (15-72)	31 (12-40)	17 (3-34)	79.98±8.74
Extended Family	30(10.2)	33 (16-79)	28,5 (8-38)	18 (11-26)	75.13±1.05
Statistic		U:3687.50 p=.557	U:2416.50 p=.000	U:3557.00 p=.376	t: 2.82 p=.005
<b>Family Income Status</b>					
Income is more than expense	30 (10.2)	33 (15-41)	30 (9-39)	17 (3-34)	78.03±1.06
Income is equal to expense	199(67.9)	33 (15-79)	30 (13-40)	17 (9-28)	80.05±8.88
Income is less than expense	64 (21.8)	33 (22-45)	30 (8-40)	17 (8-26)	78.42±8.71
Statistic		KW:0.74 p=.688	KW:0.71 p=.699	KW:2.14 p=.342	F:1.22 p=.295

**Table 4: The point distribution of the ageism attitude scale (ASS) total and sub-dimensions in terms the thoughts of the students' willingness to live and work with the older people**

Variables	n (%)	Restriction of elderly	Positive Discrimination towards elderly	Negative Discrimination towards elderly	ASS Total Score
<b>The status of living with an old/old people up to now</b>					
Yes	111 (37.9)	33 (16-72)	31 (12-40)	17 (3-28)	79.63±9.43
No	182 (62.1)	33 (15-79)	30 (8-40)	17 (8-34)	79.40±8.82
Statistic		U:9865.50 p=.737	U:9384.00 p=.307	U:9017.50 p=.122	t:0.22 p=.827
<b>The period of living with an old/old people in the same house</b>					
5 year and below	69 (23.5)	33 (16-40)	30 (14-40)	16 (10-25)	78.71±9.39
6 years and above	42 (14.3)	34 (20-72)	31,5 (12-38)	17 (3-28)	81.16±9.39
Statistic		U:1171.00 p=.090	U:1194.50 p=.120	U:1406.50 p=.795	t:1.34 p=.184
<b>The status of willingness to live with the parents in the future</b>					
Yes	223(76.1)	33 (15-79)	31 (9-40)	17 (8-34)	80.10±9.33
No	70 (23.9)	33 (18-45)	29,5 (8-39)	17 (3-26)	77.52±7.79
Statistic		U:7400.50 p=.512	U:5644.50 p=.000	U:7782.00 p=.970	t:2.09 p=.037
<b>The status of nursing old people during clinical practices</b>					
Yes	166 (56.7)	33 (15-72)	30 (9-40)	17 (3-34)	79.62±9.14
No	127 (43.3)	33 (17-79)	31 (8-40)	17 (8-26)	79.32±8.95
Statistic		U:10092.00 p=.531	U:10183.00 p=.617	U:9489.00 p=.142	t:0.27 p=.781
<b>The status willingness to work with the old after graduation</b>					
Want	170 (58.0)	33 (15-42)	31,5 (9-40)	17 (3-34)	80.19±9.31
Do not want	123(42.0)	33 (15-79)	29 (8-39)	17 (9-28)	78.52±8.60
Statistic		U: 10256.50 p=.781	U: 7949.50 p=.000	U: 9858.00 p=.402	t:1.56 p=.118

## Discussion

In the research, according to the point averages of ASS total and sub-dimensions of the students of Nursing Department in Health School, it has been put forward that their attitudes towards old age and old discrimination are positive. In a research done with university students, it has been found out by Guven et al (Guyen, Ucakan-Muz and Efe-Erturk, 2012) that the students have positive attitudes towards ageism as well. In some identical studies it is also demonstrated that university students have positive attitudes (Uysal et. al., 2014, Ehrlich, Burton and Greenberg, 2003, McKinlay and Cowan, 2003, Guven, Ucakan-Muz and Efe-Erturk, 2012). The students' display of positive attitudes can be a result of the traditional and unchangeable expectation in our country such as respecting the elderly, considering serving elderly to be important, obeying and protecting the old.

It has been found out in this study that ASS total scores of the 1<sup>st</sup> and 4<sup>th</sup> grade students are higher than 2<sup>nd</sup> and 3<sup>rd</sup> grade students'. Moreover, our findings where the scores of the 2<sup>nd</sup> grade students' negative discrimination towards the old and ASS total scores are lower than 1<sup>st</sup> grade students' are similar to findings in a study done by Soyuer et al (Soyuer et., al., 2010). Apart from the findings of our study, in a study done by Kulakci (Kulakci, 2010) on the nursing department students, it has been found out that the 4<sup>th</sup> grade students have more positive thoughts and views towards getting older and old age compared to 1<sup>st</sup> grade students. On the other hand, it has been shown in some other studies that there is no relationship between the education status and positive discrimination towards the old (Pan, Edwards and Chang, 2009). As the levels of education and learning gets higher it is expected to gain more positive attitudes towards the elderly and the period of

aging because when people get older and be mature the care the right of the others specially the elder and gain a different viewpoint towards life (Soyuer, et. al., 2010). It is explained in the study done by Yilmaz and Ozkan that depending on maturation as getting older, the nursing students have positive attitudes where the attitudes of the young adults towards ageism where defined (Yilmaz and Ozkan, 2010). Also another study is explained that 50-59 age group people have more positive attitudes towards elderly compared to  $\leq 29$  age group people (Yilmaz et. al., 2012).

In this study, the positive discrimination towards elderly and ASS total scores of the students belongs to an elementary family are higher than those belong to an extended family (Table 2). The results of the studies done by Yilmaz et al (Yilmaz et. al., 2012) and Soyuer et al (Soyuer et. al., 2010) are identical to ours. Even if the extended family is divided into elementary family depending on the reasons of fast industrialization, urbanization and technological developments, fast changes in the area of economic and social structure it is thought that the students have positive thoughts towards the old people because of the features belonging to Turkish culture (Yilmaz et. al., 2012).

In this study it has been found out that the ASS total scores and positive discrimination sub-dimension towards elderly scores of students willing to live with their parents in the future are meaningfully higher than those not wanting to live with their parents in the future.

The point averages for restricting the old's life of the students willing to live with the mother/father or both have been found high (Karadag, Vardar-Inkaya and Karatay, 2012). In another study has been seen that the scores for negative discrimination towards elderly of the students are low and among the reasons why students want to live with their parents is because they want to support them (Güven, Uçakan-Muz, Efe-Ertürk, 2012). While old people are cared and respected more in the traditional society, in today's living conditions changing family structure and hard living conditions cause value lost towards the old. However, in Turkish culture there is a close and sincere relationship between the parents and children. Moreover, respecting and loving the old by the children continues and their caring and

responsibilities are satisfied (Adibelli, Turkoglu and Kilic, 2013).

Besides, in this study positive discrimination towards the old sub-dimension scores of the students willing to work with the old people after graduation are meaningfully high compared to the students not willing to work with the old people after graduation. However, has been found out that most of the students want to work with the adult age group and a lower rate of them want to work with the elder after graduation (Adibelli, Turkoglu and Kilic, 2013). Also most of the nursing students declared that they want to work the old patients after graduation because elder people need more physical and psychological support (Yilmaz and Ozkan, 2010, Kulakci, 2010, Uysal et. al., 2014, Hughes et. al., 2008). As the students' negative attitudes towards old people and getting old affect the quality of old caring it is very crucial that the students develop positive attitudes.

One limitation of this study is that it was carried out only with nursing students from a specific region in Turkey, and also not with students from other health care professions. Therefore, the present findings cannot be generalized to all nursing students in Turkey or to other health care areas. Future research should include random sampling and increased sample size and expansion to include other health care professions such as social work, medical practice, clinical psychology and physical therapy, who will likely encounter aged individuals in their everyday practice.

Results of this research may stimulate other studies aimed at learning methods to: reduce anxiety about aging; strengthen the relationships with the aging family members; and, develop the abilities and skills for health care professionals to better serve the needs of aged individuals. We also expect future studies to investigate other factors that may affect student attitudes toward ageism.

It has been found out at the end of this research that nursing students have positive attitudes towards elder discrimination. This result can be explained with the continuing traditional family structure in Turkey. The nursing students' serving care in the area of health is very essential in terms of the students' professionally one to one relationship with the old.

The factors that affect elder discrimination are defined as class level, family structure, the status of willingness to live with the parents and the status of willingness to work with old people ( $p < 0.05$ ). In accordance with these results it can be suggested that more concepts about getting old and old health should be included in the nursing curriculum, gerontology lessons need to be added into undergraduate program curriculum, practice areas enabling students to spend more time with elderly and to serve them should be created, and training and consulting programs about old discrimination need to be created for the students with lower scores for old discrimination.

### References

- Adibelli, D., Turkoglu, N. & Kilic, D. (2013) Determining Critical Thinking Dispositions of Nursing: A Comparative Study. *Deuhyo Ed*, 1, 2-8.
- Butler, R.N. (1980) Ageism: A foreword. *Journal of Social Issues*, 2, 8-11.
- Ehrlich, A.R., Burton, W. & Greenberg, D. (2003) Positive attitudes of first year medical students towards older persons. *Journal of the American Geriatrics Society*, 5, 627-635.
- Guvenc, Ş.D., Uçkan-Muz, G. & Efe-Erturk, N. (2012) The attitudes of university students towards elderly discrimination and the relation of these attitudes with some variables. *Journal of Anatolia Nursing and Health Sciences*, 2, 99-105.
- Hughes, N.J., Soiza, R.L., Chua, M., Hoyle, G.E., McDonald, A. & Primrose, R. (2008) Medical student attitudes toward older people and willingness to consider a career in geriatric medicine. *J Am Geriatr Soc.*, 2, 334-338.
- Karadag, E., Vardar-Inkaya, B. & Karatay, G. (2012) Attitudes of nursing students towards ageism. *Journal of Ege University Nursing Faculty*, 2, 31-40.
- Kulakci, H. (2010) Evaluation of nursing students' ideas and views about old age and ageing in the first and fourth year of baccalaureate program in nursing. *DEUHYO ED*, 1, 15-22.
- Laditka, S.B., Fischer, M., Laditka, J.N. & Segal, D.R. (2004) Attitudes about aging and gender among young, middle age, and older college-based students. *Educational Gerontology*, 5, 403-421.
- McKinlay, A. & Cowan, S. (2003) Student nurses' attitudes towards working with older patients. *J Adv Nurs.*, 3, 298-309.
- Mosher-Asley, P.M. & Ball, P. (1999) Attitudes of college students toward elderly persons and their perceptions of themselves at age 75. *Educational Gerontology*, 1, 89-102.
- Ogenler, O., Yapici, G., Tasdelen, B. & Akca, T. (2012) Opinions of a group of medical doctors on elder discrimination in Mersin. *Turk J Geriatr.*, 4, 409-415.
- Ozdemir, O. & Bilgili, N. (2014) Ageism in health care. *Gulhane Med J.*, 2, 128-131.
- Palmore, E.B. (1999) *Ageism: Negative and positive*. Springer Publishing Company, New York, USA.
- Pan, I.J. & Edwards, H. & Chang, A. (2009) Taiwanese nursing students' attitudes toward older people. *J Gerontol Nurs.*, 11, 50-55.
- Ron, P. (2007) Elderly people's attitudes and perceptions of aging and old age: The role of cognitive dissonance? *Int J Geriatr Psychiatry.*, 7, 656-662.
- Soyuer, F., Unalan, D., Guleser, N. & Elmali, F. (2010) The attitudes of health vocational school students towards ageism and the relation of these attitudes with some demographical variables. *Mersin University Health Science Journal*, 2, 20-25.
- Turkish Statistical Institute. (TSI) Turkey's Statistical Yearbook [Internet]. Ankara: Turkish Statistical Institute Yearbook Printing Division (TR); 2013 [cited 2015 Nov 5]. URL: [http://www.tuik.gov.tr/Kitap.do?metod=KitapDetay&KT\\_ID=0&KITAP\\_ID=1](http://www.tuik.gov.tr/Kitap.do?metod=KitapDetay&KT_ID=0&KITAP_ID=1).
- United Nations (UN) Population Division. *World Population Prospects: The 2010 Revision* [Internet]. New York: UN Population Division (US); 2011 [cited 2011 Jul 5]. URL: <http://www.un.org/esa/population/>.
- Usta, Y.Y., Demir, Y., Yonder, M. & Yildiz, A. (2012) Nursing students' attitudes toward ageism in Turkey. *Arch Gerontol Geriatr.*, 1, 90-93.
- Uysal, G., Derya-Beydag, K., Sensoy, F., Ozaydin, N. & Kiyak, M. (2014) Attitudes of students who receive health education in a foundation university regarding age discrimination. *Social and Behavioral Sciences.*, 7, 430-434.
- Unalan, D., Soyuer, F. & Elmali, F. (2012) Evaluation of the attitudes of the geriatric care center workers towards elderly patients. *Kafkas J Med Sci.*, 3, 115-120.
- Yilmaz-Vefikulucay, D. (2011) Development and psychometric evaluation of ageism attitude scale among the university students. *Turk J Geriatr.*, 3, 259-268.
- Yilmaz, M., Altioek, M., Polat, B., Darici, M. & Sungur, M.A. (2012) Attitudes of young adults towards ageism. *Turk J Geriatr.*, 4, 416-423.
- Yilmaz, E. & Ozkan, S. (2010) Attitudes of nursing students towards ageism. *Maltepe University Nursing Science & Art*, 2, 36-53.
- Walker, H., Grant, D., Meadows, M. & Cook, I. (2007) Women's experiences and perceptions of age discrimination employment: Implications for research and policy. *Social Policy and Society*, 1, 37-48.

Wu, L.L. (2011) A cross-sectional survey of student nurses' attitudes and knowledge about older people. *Chinese Journal of Gerontology*, 5, 848-850.

Zhou, L. (2007) What college students know about older adults: a cross-cultural qualitative study. *Educational Gerontology*, 10, 811-831.