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ORIGINAL RESEARCH

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## RELATIONSHIP BETWEEN NURSING AND ELDERLY CARE STUDENTS' ATTITUDES TOWARDS AGEISM

Merve Çayır Yılmaz\*, & Fatma Zehra İnce

Ağrı İbrahim Çeçen University, Health Services Vocational High School, Ağrı, Turkey

\*Corresponding author:

Merve ÇAYIR YILMAZ

Ağrı İbrahim Çeçen University, Health Services Vocational High School, Ağrı, 04100 Turkey

E-mail: [mervehemsiire@hotmail.com](mailto:mervehemsiire@hotmail.com)

### ABSTRACT

**Background:** Perceptions of individuals and society about the elderly are reflected in the services provided to them. These reflections might be revealed in various fields such as health care services and sufficient job opportunities, or they could be revealed in the issue of discrimination against the elderly, which is a problem emerging in advanced ages.

**Objective:** This study aims to identify the relationship between nursing and elderly care program students' attitudes towards ageism.

**Methods:** This study, which is descriptive and relational method, was conducted between November and December, 2016. The participants were 220 students. The data were collected through a questionnaire, and the Ageism Attitude Scale, and were analyzed using t-test, two-way multivariate analysis of variance (MANOVA) and one-way analysis of variance (ANOVA).

**Findings:** Results show that the students generally had positive attitudes towards ageism. Nursing department students received significantly higher scores in the Limiting the Elderly Person's Life sub-dimension and Ageism Attitude Scale in comparison to Elderly Care Program students. 3<sup>rd</sup> year nursing department students had higher scores in the Ageism Attitudes Scale in comparison to 1<sup>st</sup> and 2<sup>nd</sup> year nursing department students and students in the Elderly Care Program. "Positive Discrimination towards the Elderly" sub-dimension and the "Ageism Attitudes Scale" total scores were found to be significantly higher in nursing department students according to the variable of desire to work in a geriatric service in the future. ( $p < 0.05$ ).

**Conclusion:** This study found that students had positive attitudes towards ageism, and nursing students' Ageism Attitudes Scale mean scores were higher than those of elderly care program students. More comprehensive studies are needed in order to improve students' attitudes towards elderly people.

**Keywords:** elderly, ageism, attitude

## INTRODUCTION

Ageing of the population is one of the most prominent demographic phenomena of the 21<sup>st</sup> century. Population of the elderly within the world population has been increasing due to factors such as scientific and technological developments in the health field, application of early diagnosis and treatment methods, increase in the health protecting and improving precautions, encouragement and adoption of a healthy life style, and decrease in birth rates. <sup>1-5</sup> Ageing phenomena, which is usually more apparent in developed countries, is an issue that should be given importance by not only developed but also developing countries. <sup>2</sup>

Parallel to the global ageing of the world population, elderly population has been increasing in our country, too. <sup>6</sup> Elderly population (65 and over) in our country was 6,495,239 in 2015. While the proportion of elderly population in total population was 8% in 2014, it increased to 8,2% in 2015. Elderly population composed 8,5% of the world population in 2015. Turkey has been ranked 66<sup>th</sup> among 167 countries in terms of elderly population proportion. <sup>7</sup> According to the Definition of the United Nations, a proportion of elderly population between 8% and 10% in the total population indicates that the country has “old” population, and that of over 10% indicates “very old” population. Population projections for Turkey show that elderly population proportion will increase to 10,2 % in 2023, 20,8% in 2050, and 27,7% in 2075. Thus, it is estimated that Turkey will be among the countries with “very old” population. <sup>8</sup> As to the world, it is estimated that 2 billion people will be over 60 by 2050, 80% will live in middle and low income countries, and life expectancy will increase 7.5 years. <sup>9</sup>

The effects of these demographic changes, namely ageing of the population, are seen in different dimensions in societies. Factors such as sociocultural structure of society and changes in the attitudes, behaviors, and perceptions of society about the elderly are reflected in the services provided to the elderly. These reflections could reveal themselves in health care services, health expenses, organization and financing of social security institutions, sufficient service and job opportunities, social support provided to the elderly by family and relatives, adjustment to the ageing process, obtaining sufficient income, and retirement and sheltering; or they could be revealed in “discrimination against the elderly”, which is a problem that may emerge in advanced ages. Discrimination against the elderly can be defined as discriminations against individuals through different attitudes, prejudices, behaviors, actions or institutional regulations generally merely because of their age. <sup>6, 10-12</sup>

Review of discrimination against the elderly issue shows that positive and negative attitudes are addressed together. While positive attitudes towards ageism include items such as kindness, wisdom, trustworthiness, wealth, political power, freedom, and happiness; negative attitudes involve items such as sickness, incapacity, ugliness, deterioration in mental functions, mental illnesses, uselessness, isolation, poverty, and depression. Fields that have the most common discrimination against the elderly attitudes are known to be work life, family life, social life, sexual life, and health care systems. <sup>5, 11, 13, 14</sup>

Discrimination against the elderly in health care services, one of the fields where discrimination against the elderly is quite common, is reported to be done

mainly by young people.<sup>15-17</sup> It is also reported that young people's attitudes towards the elderly should primarily be improved through the identification of young people's attitudes and views about the elderly.<sup>5</sup> This study aims to identify the relationship between the nursing and elderly care program students' attitudes towards ageism.

## METHODS

### *Study Design*

This study adopted a descriptive and relational method in order to identify the relationships between nursing and elderly care program students' attitudes towards ageism.

### *Target Population and the Participants*

Target population of the study was 124 students enrolled in the Nursing Department in the Health High School of Ağrı İbrahim Çeçen University and 176 students in the Elderly Care Program of Health Services Vocational School. No sampling was performed, we aimed to reach all the target population. The participants were 220 students who attended these schools and volunteered to participate in the study.

### *Data Collection Tools*

The data were collected through a questionnaire and the Ageism Attitudes Scale. The questionnaire, which was prepared in line with the related literature, included personal questions related to the descriptive characteristics of the participants (e.g. age, gender, class level) and their desire to provide care to the elderly.<sup>18-20</sup>

Ageism Attitudes Scale (AAS): The 23-item scale developed by Vefikuluçay (2008) is a 5-point Likert scale and has "I totally disagree" "I disagree", "I am not sure" "I agree" and "I totally agree"

options. Validity and reliability of the scale was performed, and Cronbach's alpha reliability level was found 0.80. The scale has positive and negative attitudes statements. Positive attitudes statements are scored as 5=I totally agree, 4=I agree, 3= I am not sure, 2= I disagree, and 1=I totally disagree. Limitations of life and negative attitudes statements about discrimination against the elderly are scored reversely. Scores to be obtained from the scale range between 23 and 115. The scale has no cut-off point. Thus, assessment of the data obtained from the scale is performed according to the highest score to be obtained from the scale (115). Scores below the mean score are regarded negative and those above the mean score are considered positive. Higher scores indicate more positive attitudes towards ageism.

The scale has 3 sub-dimensions that have positive and negative attitudes statements. These sub-dimensions include;

1. Limiting the Elderly Person's Life: This sub-dimension indicates the beliefs and attitudes of society about limiting elderly people's social life. The maximum score to be obtained from this sub-dimension is 45, and the minimum score is 9. The items in this sub-dimension are Item 1, 5, 12, 14, 17, 19, 21, 22, and 23.

2. Positive Discrimination towards the Elderly: This sub-dimension indicates positive beliefs and perceptions of society about elderly individuals. The maximum score to be obtained from this sub-dimension is 40, and the minimum score is 8. Items in this sub-dimension include item 2, 4, 6, 7, 8, 9, 13, and 20.

3. Negative Discrimination towards the Elderly: This sub-dimension indicates the negative beliefs and perceptions of society about elderly individuals. The maximum score to be obtained from this

sub-dimension is 30, and the minimum score is 6. Items in this sub-dimension include Item 3, 10, 11, 15, 16, and 18. <sup>5, 11</sup>

#### Data Collection

The data collection tools, delivered between November 2016 and December 2016, were administered to the students by the researchers in their classrooms after the teacher's approval was obtained. The students were asked to fill in the questionnaires, which were subsequently recollected by the researchers. Filling in the questionnaire forms took about 10 to 15 minutes.

#### Ethical Considerations

Prior to the study, written approval was obtained from the institution where the

study was conducted. The students were informed about the purpose of the study, and their verbal consent was obtained.

#### Analysis of the Data

The collected data were analyzed using a statistical package programming. Analyses included t-test, two-way multivariate analysis of variance (MANOVA) and one-way analysis of variance (ANOVA).

### FINDINGS

Table 1 displays t-test results about the differences between nursing department and elderly care program students in terms of their attitudes towards ageism.

**Table 1** Differences between Nursing Department and Elderly Care Program Students in terms of their Attitudes towards Ageism

	Department	N	$\bar{X}$	S.D.	t	p
Limiting the Elderly Person's Life	Nursing	71	37.49	3.393	<b>3.294</b>	<b>.001</b>
	Elderly Care	149	35.52	4.478		
Positive Discrimination towards the Elderly	Nursing	71	31.99	4.238	.066	.947
	Elderly Care	149	31.94	5.131		
Negative Discrimination towards the Elderly	Nursing	71	17.24	3.556	1.669	.096
	Elderly Care	149	16.28	4.162		
Ageism Attitudes Scale Total Score	Nursing	71	86.72	7.616	<b>2.467</b>	<b>.014</b>
	Elderly Care	149	83.74	8.711		

As it is shown in Table 1, while there were significant differences between nursing department and elderly care program students in terms of "Limiting the Elderly Person's Life" and "AAS Total" scores, the difference between "Positive Discrimination towards the Elderly" and "Negative Discrimination towards the elderly" dimensions indicated no significant differences.

"Limiting the elderly person's life" sub-dimension scores ( $t=3.294$ ,  $p<.05$ ) of nursing department students ( $\bar{X}=37.49$ )

were higher than those of elderly care program students ( $\bar{X}=35.52$ ); and nursing students' "AAS Total" scores were significantly higher than those of elderly care program students ( $\bar{X}=83.74$ ).

Table 2 displays two-way multivariate analysis of variance (MANOVA) results about AAS and sub-dimensions of AAS according to age and department variables.

**Table 2** MAVOVA Analysis results of Attitudes towards ageism Scores according to Department and Age Variables

	Wilks'λ	F	Hypothesis SD	Error SD	p	η <sup>2</sup>
Department	.957	3.138	3	210	.026	.043
Age	.965	.848	9	511	.572	.012
Age x Department	.949	1.240	9	511	.268	.017

As it is seen in Table 2, an analysis of the co-effects of department and age indicated no differences in the dependent variables (Wilks' λ =.949; F<sub>(9;511)</sub> =1.240, p>.05, η<sup>2</sup>=.017). In this regard, linear component scores obtained from the sub-dimensions of AAS and total scores indicated no differences between nursing department and elderly care program students in the age groups of 16 to 18, 19

to 21, 22 to 24, and 25 and over. It thus can be said that nursing department and elderly care program students' attitudes towards ageism scores showed no differences according to the age variable.

Table 3 displays one-way analysis of variance (ANOVA) results about sub-dimensions of AAS and "AAS Total" variables.

**Table 3** Analysis Results regarding the Differences between Nursing Department and Elderly Care Program Students' Attitudes towards Ageism

		F	p	η <sup>2</sup>
Department	Limiting the Elderly Person's life	<b>5.460</b>	<b>.020</b>	<b>.025</b>
	Negative Discrimination towards the Elderly	.809	.369	.004
	Positive Discrimination towards the Elderly	<b>5.590</b>	<b>.019</b>	<b>.026</b>
	AAS Total	<b>7.856</b>	<b>.006</b>	<b>.036</b>
Age	Limiting the Elderly Person's life	1.037	.377	.014
	Negative Discrimination towards the Elderly	1.339	.263	.019
	Positive Discrimination towards the Elderly	.574	.633	.008
	AAS Total	1.010	.389	.014
Department x Age	Limiting the Elderly Person's life	.914	.435	.013
	Negative Discrimination towards the Elderly	.965	.410	.013
	Positive Discrimination towards the Elderly	1.494	.217	.021
	AAS Total	1.084	.357	.015

One-way analysis of variance (ANOVA) results showed significant differences between nursing department and elderly care program students in the "Limiting the Elderly Person's life" and "Positive Discrimination towards the Elderly" and "AAS Total" scores, but no significant differences were detected in the "Negative Attitudes towards the Elderly" dimension.

"Limiting the Elderly Person's life" sub-dimension scores (F<sub>(1,212)</sub> = 5.460, p<.05, η<sup>2</sup>=.025) of nursing department students ( $\bar{x}$ =37.49) were higher in comparison to elderly care program students ( $\bar{x}$ =35.52). "Positive Discrimination towards the Elderly" sub-dimension scores (F<sub>(1,212)</sub> = 5.590, p<.05, η<sup>2</sup>=.026) of nursing department students ( $\bar{x}$ =17.24) were higher in comparison to elderly care program students ( $\bar{x}$ =16.28).

“AAS Total” scores ( $F_{(1,212)} = 7.856$ ,  $p < .05$ ,  $\eta^2 = .036$ ) of nursing students ( $\bar{X} = 86.72$ ) were significantly higher in comparison to elderly care students ( $\bar{X} = 83.74$ ).

One-way analysis of variance (ANOVA) results show that no significant differences existed between “Limiting the Elderly Person’s Life”, “Negative Discrimination towards the Elderly”, and “Positive Discrimination towards the Elderly” dimensions and “AAS Total” levels according to the age groups of the students.

One-way analysis of variance (ANOVA) results indicated no significant differences between “Limiting the Elderly Person’s Life”, “Negative Discrimination towards the Elderly”, and “Positive Discrimination towards the Elderly” dimensions and “AAS Total” levels according to students’ age and departments.

Table 4 displays two-way multivariate analysis of variance (MANOVA) results of nursing department and elderly care program students’ AAS sub-dimension scores and AAS total scores according to gender and department variables.

**Table 4** MANOVA Analysis results of the Attitudes towards Ageism Scores according to Department and Gender Variables

	Wilks’ $\lambda$	F	Hypothesis SD	Error SD	p	$\eta^2$
Department	.958	3.134	3	214	.026	.042
Gender	.982	1.279	3	214	.283	.018
Gender x Department	.990	.687	3	214	.561	.010

An analysis of the co-effects of department and gender in Table 4 indicated no differences in terms of the dependent variables (Wilks’  $\lambda = .990$ ;  $F_{(3;214)} = 0.687$ ,  $p > .05$ ,  $\eta^2 = .010$ ). Accordingly, the linear component scores obtained from the sub-dimensions of AAS and AAS total scores indicated no significant differences between female and male nursing department and elderly care program students. It seems that nursing department and elderly care program students’ attitudes towards ageism scores did not show differences according to the gender variable.

Table 5 displays one-way analysis of variance (ANOVA) results about the sub-dimensions of AAS and “AAS Total” variables.

One-way analysis of variance (ANOVA) results indicated significant differences between the nursing

department and elderly care program students in terms of “Limiting the Elderly Person’s Life” dimension and “AAS Total” levels, but “Negative Discrimination towards the Elderly” and “Positive Discrimination towards the Elderly” dimensions indicated no significant differences.

“Limiting the Elderly Person’s Life” sub-dimension scores ( $F_{(1,212)} = 8.078$ ,  $p < .05$ ,  $\eta^2 = .036$ ) of nursing students ( $\bar{X} = 37.42$ ) were higher in comparison to elderly care program students ( $\bar{X} = 35.65$ ); and AAS total scores ( $F_{(1,212)} = 7.856$ ,  $p < .05$ ,  $\eta^2 = .020$ ) of nursing students ( $\bar{X} = 86.72$ ) were higher in comparison to elderly care program students ( $\bar{X} = 83.74$ ).

The table also demonstrates that one-way analysis of variance (ANOVA) results indicate no significant differences in the “Limiting the Elderly Person’s Life”, “Negative Discrimination towards

the Elderly” and “Positive Discrimination towards the Elderly” dimensions and “AAS Total” levels according to the gender variable.

One-way analysis of variance (ANOVA) results show that there were no significant differences in the “Limiting the Elderly Person’s Life”, “Negative Discrimination towards the Elderly” and “Positive Discrimination towards the

Elderly” dimensions and “AAS Total” levels according to gender and department variables.

Table 6 displays two-way multivariate analysis of variance (MANOVA) results in relation to AAS sub-dimension scores and AAS total scores of nursing department and elderly care program students according to class and department variables.

**Table 5** Analysis Results about the Differences between Nursing and Elderly Care Students’ Attitudes towards Ageism

		F	p	$\eta^2$
Department	Limiting the Elderly Person’s Life	<b>8.078</b>	<b>.005</b>	<b>.036</b>
	Negative Discrimination towards the Elderly	.006	.941	.000
	Positive Discrimination towards the Elderly	2.487	.116	.011
	AAS Total	<b>4.465</b>	<b>.036</b>	<b>.020</b>
Gender	Limiting the Elderly Person’s Life	.061	.805	.000
	Negative Discrimination towards the Elderly	2.020	.157	.009
	Positive Discrimination towards the Elderly	2.003	.158	.009
	AAS Total	.001	.976	.000
Department x Gender	Limiting the Elderly Person’s Life	1.711	.192	.008
	Negative Discrimination towards the Elderly	.014	.904	.000
	Positive Discrimination towards the Elderly	.543	.462	.003
	AAS Total	.861	.355	.004

**Table 6** MANOVA Analysis Results of the Attitudes towards Ageism Scores according to Department and Class Variables

	Wilks’ $\lambda$	F	Hypothesis SD	Error SD	p	$\eta^2$
Department	.970	2.192	3	213	.090	.030
Class (year)	.980	.721	6	426	.633	.010
Class (year) x Department	<b>.950</b>	<b>3.736</b>	<b>3</b>	<b>213</b>	<b>.012</b>	<b>.050</b>

Table 6 displays co-effects of department and class variables, which indicates significant differences in the dependent variables (Wilks’  $\lambda = .950$ ;  $F_{(3;213)}=3.736$ ,  $p<.05$ ,  $\eta^2=.050$ ). Accordingly, linear component scores obtained from the sub-dimensions display differences between nursing department and elderly care program students according to the variable of attending 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> years.

Tukey HSD Post Hoc test results show that attitudes towards ageism scores of 3<sup>rd</sup> year nursing department students were higher than those of 1<sup>st</sup> and 2<sup>nd</sup> year nursing department students and elderly care program students.

Table 7 demonstrates one-way analysis of variance (ANOVA) results of AAS sub-dimensions and “AAS Total” variables.

**Table 7** Analysis results regarding the Differences between Nursing Department and Elderly Care Program Students in terms of their Attitudes towards Ageism

		F	p	$\eta^2$
Department	Limiting the Elderly Person's Life	<b>5.015</b>	<b>.026</b>	<b>.023</b>
	Negative Discrimination towards the Elderly	.311	.578	.001
	Positive Discrimination towards the Elderly	1.457	.229	.007
	AAS Total	1.840	.176	.008
Class	Limiting the Elderly Person's Life	1.084	.340	.010
	Negative Discrimination towards the Elderly	.882	.415	.008
	Positive Discrimination towards the Elderly	.672	.512	.006
	AAS Total	1.768	.173	.016
Department x Class	Limiting the Elderly Person's Life	1.377	.242	.006
	Negative Discrimination towards the Elderly	.055	.815	.000
	Positive Discrimination towards the Elderly	<b>10.998</b>	<b>.001</b>	<b>.049</b>
	AAS Total	<b>3.962</b>	<b>.048</b>	<b>.018</b>

One-way analysis of variance (ANOVA) results showed significant differences between nursing department and elderly care program students in the "Limiting the Elderly Person's Life" dimension; however, no significant differences were found in the "Negative Discrimination towards the Elderly" and "Positive Discrimination towards the Elderly" dimensions and "AAS Total" score levels.

"Limiting the Elderly Person's Life" sub-dimension scores ( $F_{(1,212)}= 5.015$ ,  $p<.05$ ,  $\eta^2=.023$ ) of nursing students ( $\bar{x}=37.54$ ) were found to be significantly higher than those of elderly care program students ( $\bar{x}=35.50$ ).

One-way analysis of variance (ANOVA) results in the table indicate no significant differences in the "Limiting the Elderly Person's Life", "Negative Discrimination towards the Elderly" and "Positive Discrimination towards the Elderly" dimensions and "AAS Total" levels according to the class variable.

As it is seen in the table, while one-way analysis of variance (ANOVA) results showed significant differences according to the class and department variables in the "Positive Discrimination towards the Elderly" dimension and "AAS

Total" dimension levels, no significant differences were found in the "Limiting the Elderly Person's Life" and "Negative Discrimination towards the Elderly" dimensions.

Results show that "Positive Discrimination towards the Elderly" sub-dimension scores ( $F_{(1,212)}= 10.988$ ,  $p<.05$ ,  $\eta^2=.049$ ) are  $\bar{x}=17.77$  in 1<sup>st</sup> year students,  $\bar{x}=16.13$  in 2<sup>nd</sup> year students,  $\bar{x}=17.86$  in 3<sup>rd</sup> year students,  $\bar{x}=14.93$  in 1<sup>st</sup> year elderly care program students and ( $\bar{x}=17.45$ ) in 2<sup>nd</sup> year students. "Positive Discrimination towards the Elderly" sub-dimension scores of 1<sup>st</sup> and 3<sup>rd</sup> year nursing department students were significantly higher than those of 2<sup>nd</sup> year students; and as for the elderly care, 2<sup>nd</sup> year elderly care program students' scores were significantly higher than those of 1<sup>st</sup> year students.

The table also shows that AAS total scores ( $F_{(1,212)}= 3.962$ ,  $p<.05$ ,  $\eta^2=.018$ ) were  $\bar{x}\bar{x}=86.92$  in 1<sup>st</sup> year students,  $\bar{x}\bar{x}=84.042$  in 2<sup>nd</sup> year students,  $\bar{x}\bar{x}=89.52$  in 3<sup>rd</sup> year students,  $\bar{x}\bar{x}=82.39$  in 1<sup>st</sup> year elderly care program students, and  $\bar{x}\bar{x}=84.90$  in 2<sup>nd</sup> year students. AAS total scores of 1<sup>st</sup> and 3<sup>rd</sup> year nursing students were found to be significantly higher in

comparison to 2<sup>nd</sup> year students; and 2<sup>nd</sup> year elderly care program students' scores were significantly higher than 1<sup>st</sup> year students.

Table 8 demonstrates two-way multivariate analysis of variance

(MANOVA) results of AAS sub-dimensions and AAS total scores of nursing and elderly care students according to the department and providing care to the elderly in clinics variables.

**Table 8** MANOVA Analysis Results of Attitudes towards Ageism Scores according to the Department and Providing Care to the Elderly Variables

	Wilks'λ	F	Hypothesis SD	Error SD	p	η <sup>2</sup>
Department x	.951	3.674	3	214	.013	.049
Providing care to the elderly in clinics	.983	1.265	3	214	.287	.017
Providing care to the elderly in clinics x Department	.999	.045	3	214	.987	.001

An analysis of co-effects of department and providing care to the elderly in clinics indicates no differences in the dependent variables (Wilks' λ =.999;  $F_{(3;214)}=0.045$ ,  $p>.05$ ,  $\eta^2=.001$ ). Accordingly, linear component scores obtained from sub-dimensions of AAS were found to demonstrate no significant differences between nursing students who provide care to the elderly in clinics and

who do not and elderly care program students.

It seems that there are no differences between nursing department and elderly care program students' attitudes towards ageism according to providing care to the elderly in clinics or not.

One-way analysis of variance (ANOVA) results of AAS sub-dimension and "AAS total" variables are shown in Table 9.

**Table 9** Analysis Results of the Differences between Nursing Department and Elderly Care Program Students in terms of the Attitudes towards Ageism

		F	p	η <sup>2</sup>
Department	Limiting the Elderly Person's Life	<b>8.454</b>	<b>.004</b>	<b>.038</b>
	Negative Discrimination towards the Elderly	.000	.982	.000
	Positive Discrimination towards the Elderly	<b>4.571</b>	<b>.034</b>	.021
	AAS Total	<b>5.950</b>	<b>.016</b>	.027
Providing care to the elderly in clinics	Limiting the Elderly Person's Life	.091	.763	.000
	Negative Discrimination towards the Elderly	.107	.743	.000
	Positive Discrimination towards the Elderly	3.327	.070	.015
	AAS Total	.269	.604	.001
Department x Providing care to the elderly in clinics	Limiting the Elderly Person's Life	.047	.829	.000
	Negative Discrimination towards the Elderly	.029	.864	.000
	Positive Discrimination towards the Elderly	.013	.910	.000
	AAS Total	.002	.964	.000

One-way analysis of variance (ANOVA) results show that while there were significant differences between

nursing and elderly care students' scores about "Limiting the Elderly Person's Life", "Positive Discrimination towards

the Elderly” dimensions and “AAS Total” scores, no significant differences were found in the “Negative Discrimination towards the Elderly” dimension.

“Limiting the Elderly Person’s Life” sub-dimension scores ( $F_{(1,212)}= 8.455$ ,  $p<.05$ ,  $\eta^2=.038$ ) of nursing department students ( $\bar{x}=37.42$ ) were higher in comparison to elderly care program students ( $\bar{x}=35.52$ ). “Positive Discrimination towards the Elderly” sub-dimension scores ( $F_{(1,212)}= 4.571$ ,  $p<.05$ ,  $\eta^2=.021$ ) of nursing students ( $\bar{x}=17.50$ ) were significantly higher compared to elderly care program students ( $\bar{x}=16.18$ ); and “AAS Total” scores ( $F_{(1,212)}= 5.950$ ,  $p<.05$ ,  $\eta^2=.027$ ) of nursing students ( $\bar{x}=86.88$ ) were significantly higher in

comparison to elderly care program students ( $\bar{x}=83.68$ ).

The table also shows one-way analysis of variance (ANOVA) results according to providing care to the elderly in clinics; no significant differences were found in the “Limiting the Elderly Person’s Life”, “Negative Discrimination towards the Elderly” and “Positive Discrimination towards the Elderly” dimensions and “AAS Total” levels.

One-way analysis of variance (ANOVA) results according to providing care to the elderly in clinics and departments indicated no significant differences in the “Limiting the Elderly Person’s Life”, “Negative Discrimination towards the Elderly” and “Positive Discrimination towards the Elderly” dimensions and “AAS Total” levels.

**Table 10** MANOVA analysis results of Attitudes towards Ageism according to the Department and Desire to work in Geriatric Service in the Future Variables

	Wilks’ $\lambda$	F	Hypothesis SD	Error SD	p	$\eta^2$
Department x	.940	4.531	3	214	.004	.060
Desire to work in the Geriatric Service in the Future	.959	3.063	3	214	.029	.041
Desire to work in the Geriatric Service in the Future x Department	.994	.433	3	214	.730	.006

Co-effects of department and desire to work in the geriatric service in the future variables indicated no differences in dependent variables (Wilks’  $\lambda =.994$ ;  $F_{(3,214)}=0.433$ ,  $p>.05$ ,  $\eta^2=.006$ ). Accordingly, linear component scores obtained from the sub-dimensions and total scores of AAS showed no differences between nursing department students who want to work in geriatric service in the future and who do not and

elderly care program students. It seems that there were no differences between nursing and elderly care students’ attitudes towards ageism according to the desire to work in the Geriatric Service in the future variable.

Table 11 displays one-way analysis of variance (ANOVA) results of AAS sub-dimensions and “AAS total” variables.

**Table 11** Analysis Results of the Differences between Nursing Department and Elderly Care Program Students' Attitudes towards Ageism

		F	p	$\eta^2$
Department	Limiting the Elderly Person's Life	<b>11.107</b>	<b>.001</b>	<b>.049</b>
	Negative Discrimination towards the Elderly	.214	.644	.001
	Positive Discrimination towards the Elderly	<b>5.027</b>	<b>.026</b>	<b>.023</b>
	AAS Total	<b>9.108</b>	<b>.003</b>	<b>.040</b>
Desire to work in the Geriatric Service in the Future	Limiting the Elderly Person's Life	3.526	.062	.016
	Negative Discrimination towards the Elderly	2.533	.113	.012
	Positive Discrimination towards the Elderly	<b>4.903</b>	<b>.028</b>	<b>.022</b>
	AAS Total	<b>8.636</b>	<b>.004</b>	<b>.038</b>
Department x Desire to work in the Geriatric Service in the Future	Limiting the Elderly Person's Life	.978	.324	.005
	Negative Discrimination towards the Elderly	.002	.969	.000
	Positive Discrimination towards the Elderly	.098	.755	.000
	AAS Total	.137	.712	.001

According to one-way analysis of variance (ANOVA) results, there were significant differences between nursing department and elderly care program students in the "Limiting the Elderly Person's Life" and "Positive Discrimination towards the Elderly" dimensions and "AAS Total" score levels; however, no significant differences were detected in the "Negative Discrimination towards the Elderly" dimension levels.

"Limiting the Elderly Person's Life" sub-dimension scores ( $F_{(1,212)}= 11.107$ ,  $p<.05$ ,  $\eta^2=.049$ ) of nursing department students ( $\bar{x}=37.49$ ) were significantly higher in comparison to elderly care department students ( $\bar{x}=35.37$ ).

"Positive Discrimination towards the Elderly" sub-dimension scores ( $F_{(1,212)}= 5.027$ ,  $p<.05$ ,  $\eta^2=.023$ ) of nursing students ( $\bar{x}=17.23$ ) were higher in comparison to elderly care program students ( $\bar{x}=15.88$ ); and AAS total scores ( $F_{(1,212)}= 9.108$ ,  $p<.05$ ,  $\eta^2=.040$ ) of nursing department students ( $\bar{x}=86.69$ ) were significantly higher in comparison to elderly care program students ( $\bar{x}=82.88$ ).

The table also indicates that according to one-way analysis of variance

(ANOVA) results, there were significant differences in the "Positive Discrimination towards the Elderly" dimension and "AAS Total" score levels, but no significant differences were found in the "Limiting the Elderly Person's Life" and "Negative Discrimination towards the Elderly" dimensions.

"Positive Discrimination towards the Elderly" sub-dimension scores ( $F_{(1,212)}= 4.903$ ,  $p<.05$ ,  $\eta^2=.022$ ) of nursing students ( $\bar{x}=17.22$ ) were significantly higher than elderly care program students ( $\bar{x}=15.89$ ). AAS Total scores ( $F_{(1,212)}= 8.636$ ,  $p<.05$ ,  $\eta^2=.038$ ) of nursing students ( $\bar{x}=86.64$ ) were significantly higher in comparison to elderly care program students ( $\bar{x}=82.93$ ).

One-way analysis of variance (ANOVA) results indicated no significant differences in "Limiting the Elderly Person's Life", "Negative Discrimination towards the Elderly" and "Positive Discrimination towards the Elderly" dimensions and "AAS Total" levels according to the desire to work in the geriatric service in the future and department variables.

## DISCUSSION

This study, which was conducted with participants enrolled in two different health departments, found that students had generally positive attitudes towards ageism. The literature has studies which similarly report positive attitudes towards discrimination against the elderly<sup>1, 21-31</sup>, and some others which indicate negative or neutral attitudes.<sup>35</sup>

Comparison of the attitudes towards ageism of the two groups show that nursing department students' "Limiting the Elderly Person's Life" sub-dimension scores and AAS total scores were significantly higher than those of elderly care program students. Contrary to our findings, Köse et al. (2015) found that nursing students had lower AAS total scores.<sup>3</sup> Similarly, Zambrini et al. (2008), in their study conducted with students from 7 different departments related to health care services, found that nursing department students had less positive attitudes towards the elderly.<sup>36</sup> In their study conducted with medical and nursing department students, Ayoğlu et al. (2014) found that medical students had more positive attitudes towards the elderly in comparison to nursing students<sup>37</sup>. Unlike Ayoğlu et al., Wang et al. (2009) found that nursing students had more positive attitudes than medical students<sup>38</sup>; and Zverev (2013) found no significant differences between the two student groups in terms of their attitudes towards the elderly.<sup>39</sup> Ayoğlu et al. (2014), conducted a study with medical and nursing department students and found that medical department students had more positive attitudes towards the elderly.

Linear component scores obtained from the sub-dimensions and total scores of AAS displayed significant differences between nursing department and elderly

care program students according to attending 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> year. 3<sup>rd</sup> year nursing department students were found to have higher attitudes towards ageism scores than 1<sup>st</sup> and 2<sup>nd</sup> year nursing department students and elderly care program students. It seems that positive attitudes towards the elderly increase with the increases in class level. While some studies in the literature report similar findings<sup>1, 11, 22, 26, 34, 40-44</sup>, there are some others which show that attitudes scores decrease with the increase in class level.<sup>24, 38, 45-47</sup>

Our results show that "Positive Discrimination towards the Elderly" sub-dimension scores and "AAS Total" scores of 1<sup>st</sup> and 3<sup>rd</sup> year nursing department students were significantly higher in comparison to 2<sup>nd</sup> year students. Yılmaz and Özkan (2010) reported findings similar to the ones in our study.<sup>1</sup> As for the elderly care program, 2<sup>nd</sup> year elderly care program students' "Positive Discrimination towards the Elderly" sub-dimension scores and "AAS Total" scores were significantly higher in comparison to 1<sup>st</sup> year students. Soyuer et al. (2010), in their study conducted with health high school students, reported different results from the one ones in our study; "Positive Discrimination towards the Elderly" sub-dimension scores and "AAS Total" scores of 1<sup>st</sup> year students were significantly higher in comparison to 2<sup>nd</sup> year students.<sup>45</sup> In their study conducted with elderly care program students, Özbek Yazıcı et al (2015) reported no significant differences in "AAS Total" scores; 2<sup>nd</sup> year students were found to have significantly higher "Limiting the Elderly Person's Life" sub-dimension scores in comparison to 1<sup>st</sup> year students.<sup>19</sup>

"Positive Discrimination towards the Elderly" sub-dimension scores and "AAS Total" scores of nursing department

students were found to be significantly higher in comparison to elderly care program students according to desire to work in the geriatric service. Altay and Aydın (2015) reported significant differences in students' "Positive Discrimination towards the Elderly" sub-dimension and "AAS Total" scores according to the desire to provide care to the elderly after graduation variable. In their study conducted with nursing students, Bleijenberg et al. (2012) found that students did not want to work with elderly people in the future<sup>42</sup>, Sheikh et al. (2013) found that medical department students did not plan to do a career in geriatrics<sup>44</sup>, Shen and Xiao (2012) found that geriatric care was preferred by nursing students less than other care fields.<sup>47</sup>

#### LIMITATIONS OF THE STUDY

Limitations of this study are that it was conducted with students in only one university, not all the students in the departments could be reached, and there were no 4<sup>th</sup> year nursing department students.

#### CONCLUSION

Students were found to have generally positive attitudes towards ageism. Comparison of the two groups' attitudes towards ageism showed that nursing department students had higher mean scores, students' positive attitudes towards the elderly increased with the increase in their class level, and nursing students were more willing to work in geriatric service in the future in comparison to elderly care program students.

Identification of the attitudes and views of nursing and elderly care program students who will work in the health field in the future might enable to eliminate negative discrimination towards the

elderly, which could be achieved through more comprehensive studies on the issue.

#### Declaration of Conflicting Interest

None declared.

#### Author Contribution

Both authors contributed equally in this study.

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