

## Original Article

## Effect of Nurses' Attitudes on Care Behaviour to Elderly Individuals

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### Abstract

**Background:** Nurses play important roles in ensuring that the ageing process of individuals occurs positively. Attitudes towards elderly individuals directly affect their care behaviors.

**Objective:** The aim of this study was to evaluate the effect of nurses' attitudes towards elderly individuals on their care behaviors.

**Methodology:** The study was carried out with volunteer 400 nurses working in a university and state hospital between May and November 2018. The questionnaire, Ageism Attitude Scale and Caring Behaviors-24 Scale were used in the study. Mann-Whitney U, Kruskal Wallis-H test and correlation analysis were used for data analysis.

**Results:** A significant relationship was found between the ages of the participants and the total scores of scales. A statistically significant difference was found between the living in the same house with the elderly, caring the elderly currently and being trained related to elderly, and total and sub-scales scores ( $p < 0.05$ ). Nurses who were basic nursing education and associate's degree had lower points for Ageism Attitude Scale total, limitation of life and positive discrimination sub-scales points compared with nurses who were university Bachelor's degree and Master's degree. Those employed in intensive care units had lower Ageism Attitude Scale total and limitation of elderly life sub-scales points compared with those employed in clinic and polyclinic. There was a statistically significant positive relationship between Ageism Attitude Scale and Caring Behaviors-24 Scale total scores ( $p < 0.05$ ).

**Conclusion:** According to the results of our study, it can be concluded that nurses having positive attitudes towards elderly individuals will increase the quality and efficacy of care.

It can be stated that the positive attitude towards the elderly will also positively affect the caring behaviors.

**Keywords:** nursing; older adult; ageism; nursing care behavior

### Introduction

According to the data from the Population Reference Bureau 2018, there is a rapid increase in the older people population with a decrease in birth and death rates globally. The geriatric population was 5% globally in 1960 and rose to 9% in 2018. In 2050, it is estimated that the proportion of individuals aged 85 years and older will reach 16%. (<https://www.prb.org/2018-world-population-data-sheet-with-focus-on-changing-age-structures/>). In Turkey, according to the Turkish Statistical Institute 2018 data, the geriatric population (65 years and older) was 7.7% in 2013 and rose to 8.5% in 2017. ([www.tuik.gov.tr/PdfGetir.do?id=27595](http://www.tuik.gov.tr/PdfGetir.do?id=27595)) With the improvement of living conditions, the

increasing older people population caused new problems for the older people. (Tobi, Fathi & Amaratunga, 2017) Showing the rapid increase in the number of older people in the population and negative images related to ageing in social media as well as a variety of communication tools results in the rapid progress of age discrimination in society. (Kapucu, 2019) This situation causes an increase in the geriatric patient population in healthcare systems. The increasing problems with ageing are directly reflected in the healthcare system and may affect attitudes of healthcare providers towards older people patients. For discriminatory attitudes towards the older people, the individual's experiences related to ageing through their lifetime are important. (Kapucu, 2019) Life-

prolonging advancements in health care have created more complex care needs for the ageing population. There has been a rising demand for health professionals, including nurses with expertise in gerontology care, to respond to the growing and complex ageing population. (Rush et al., 2017) Despite the anticipated rise in demand for gerontology nurses, care of older people has not been a highly desirable area of nursing practice. Gerontology nurses believe health care is a higher priority for younger adults. (Rababa et al., 2020) In a recent South Korean study, 48.1% of community-dwelling older adults had experienced at least one situation of negative ageism in local healthcare centers. (Kang et al., 2017). Nurses play important roles in ensuring that the ageing process of individuals occurs positively. (Goes et al., 2020) With the 'Healthy Ageing' theme in 1992, the International Council of Nurses clearly stated the duties and responsibilities of nurses in relation to geriatric individuals. This theme targets sustaining independence of the older people individual and increasing their quality of life. (<http://www.icn.ch/policy/nursing-definitions.html>) Lack of staff trained in geriatric patient care are the factors that may reduce the quality of geriatric patient care and directly threaten patient safety. (Voumard et al., 2018) It is well known that outcomes of care improve when nurses with geriatric knowledge and skills care for older patients. (Hertz & Tomlinson, 2018) Nurses' held coexisting positive and negative attitudes towards generic and specific aspects of older adult care. Negative attitudes, in particular, were directed at the characteristics of older adults, their care demands or reflected in nurses' approaches to care. (Rush, Hickey, Epp & Janke, 2017) Negative bias against older adults among nurses leads to inadequate allocation of health services and elder mistreatment. (Rababa, Hammouri, Hweidi & Ellis, 2020). Attitudes towards older people individuals directly affect their care behaviors. In a study, it was concluded that nurses who consider giving care to older people adults as burden some are more negative than those who have no attitude towards older people adult care. (de Almeida Tavares et al., 2015) Deficiencies in relation to geriatric care should be resolved, and patient care should be approached from a holistic viewpoint. Thus, the desired quality of geriatric patient care will be ensured. (Jaul, Barron, Rosenzweig, & Menczel, 2018). **Aim** The purpose of this study was to

evaluate the effect of nurses' attitudes on care behaviour towards older people individuals.

## Methods

**Study design and sampling method:** This study was conducted as a descriptive. The population of the study was comprised of nurses employed in university and state hospitals (n:580). During the research, 32.1% of the nurses in the universe could not be sampled. (17.2% of the nurses in the universe did not agree to participate in the research, 10.3% of the nurses could not be reached due to reasons such as maternity leave, military leave, and 3.4% of the nurses' survey was not included due to missing data) The sample consisted of 400 nurses who were volunteer to participate in the study.

**Data collection:** Survey prepared by researchers, the Care Behaviour Scale-24 (CBS-24) and Ageism Attitude Scale (AAS) were used as data collection tools. Participants were informed about the study through face-to-face interviews and their written consent was obtained. The researchers distributed the data collection forms used in the research and the nurses were asked to complete them. The forms were collected the same day in order that time spent on the research did not affect the nurses' working hours. Data were collected through between May and November 2018 by the researchers.

**Data collection tools: Nurse Information form.** The questionnaire consisted of 20 questions including demographic data of the participants, opinions about older people care and factors affecting aged care.

**Care Behaviour Scale-24 (CBS-24).** This scale was developed to obtain opinions from both patients and nurses. The short form of the scale, comprising 24 items, was created by Wu et al. Turkish validity and reliability study was conducted by Kursun and Kanan. (Kursun & Kanan, 2012) The scale evaluates the quality of care provided by nurses and how this care is reflected to patients. The scale has four sub-scales and a total of 24 questions with six-point likert responses. These sub-scales are security, knowledge-skills, being respectful and attachment. They were scored based on a scale from 1 to 6, and as points increase the perception levels of care quality increase for patients or nurses. In this study, the CBS-24 total Cronbach's alpha value was found to be 0.95. **Ageism Attitude Scale(AAS).** This scale, comprising 23 items with five-point likert type, was developed by Vefikulucay and Terzioglu.

The sub-scales of the scale were developed to determine limitations of older people life preventing the older people individual from having a social life, determine positive approaches to the older people with positive discrimination towards them and determine negative approaches to the older people with negative discrimination towards them. The total points that can be obtained from the scale are 23–115, and high points represent positive attitudes towards the older people. (Vefikuluçay Yılmaz & Terzioglu, 2011) In this study, the Cronbach's alpha value was found to be 0.77.

**Data analysis:** For data analysis, the IBM SPSS Statistics Version 22 programme was used. Shapiro Wilk's test was used to determine whether the data were normally distributed or not. Frequency, percentage, mean, standard deviation, Mann–Whitney U, Kruskal–Wallis H, Spearman's correlation coefficient and post-hoc multiple comparison tests were used.  $p < 0.05$  accepted as significant.

**Ethical considerations:** To be able to perform the study, institutional permission was obtained from Health Application and Research Centre and State Hospital; ethics permission was granted by Non-Interventional Clinical Research Ethics Committee (2062/18/04/10). Permission was granted for use of the scales through mails from the authors. Written informed consent was taken from the participants.

## Results

The average age of the nurses was  $33.3 \pm 7.5$ , 86.2% were female, 41% were basic nursing education graduates and 29.5% were working for 1–5 years. 59.7% of the nurses lived in the same house with the older people, 80.5% gave care to the older people in working life, and now they provide care to the older people individual in the clinic where they work. The mean value for CBS-24 total points was  $4.96 \pm 0.57$ . The mean points for the sub-scales; scales were  $4.94 \pm 0.67$  for security,  $5.08 \pm 0.68$  for knowledge–skills,  $4.95 \pm 0.62$  for being respectful and  $4.9 \pm 0.65$  for attachment. The mean value for total AAS points was  $75.56 \pm 10.61$ . The mean values for sub-scales scales were  $30.94 \pm 7.01$  for limitations of older people life,  $26.84 \pm 5.87$  for positive discrimination towards the older people and  $17.78 \pm 4.31$  for negative discrimination towards the older people. As the age of nurses increased, the AAS total points were observed to reduce ( $r = -0.362$ ;  $p < 0.001$ ). Nurses who were basic nursing education and associate's degree had

lower points for AAS total, limitation of life and positive discrimination sub-scales points compared with nurses who were university Bachelor's degree and Master's degree. Those employed in intensive care units had lower AAS total and limitation of older people life sub-scales points compared with those employed in clinic and polyclinic. Those employed for 6 years or longer were found to have lower AAS total, limitation of older people life and positive discrimination towards the older people sub-scales points compared with those working for less than 1 year or from 1–5 years ( $p < 0.05$ ). (Table 1). There were statistically significant differences in scale points for nurses living with older people individuals ( $p < 0.05$ ). Living with older people people and being involved in their care positive discrimination and negative discrimination sub-scales were statistically significant ( $p < 0.05$ ). Currently employed in clinical settings to care for older people individuals resulted to lower positive attitudes towards the older people ( $p < 0.05$ ). Nurses without training related to elder care during before or after graduation had lower AAS total, limitations of older people life and positive discrimination towards the older people sub-scales points ( $p < 0.05$ ) (Table 1). As the ages of nurses increased, the total CBS-24 points were found to decrease ( $r = -0.219$ ;  $p < 0.001$ ). Nurses in the 20–30-year age group had higher CBS-24 total and sub-scales points. Nurses who were basic nursing education and associate's degrees had lower CBS-24 total and sub-scales points. Those who were employed for 11–15 years had lower CBS-24 total and sub-scales points compared with the other groups ( $p < 0.05$ ) (Table 2). The CBS-24 total, security and knowledge–skill sub-scales points were lower for nurses living with older people. There were statistically significant differences for knowledge–skill, being respectful and attachment sub-scales points for nurses working with older people in their current clinical assignment ( $p < 0.05$ ). There was a statistically significant difference in scale points according to whether nurses had received training on elder care during their education or after graduation ( $p < 0.05$ ). Nurses who had not received training on elder care during education or after graduation were identified to have lower points compared to nurses who had received this training (Table 2). The total points for the CBS had a statistically significant and positive correlation with the total points on the AAS ( $p < 0.05$ ) (Table 3).

**Table 1. AAS Mean Points According to Demographic Data and Nurses Opinions on Elderly Care (n=400)**

Demographics and Nurses Opinions on Elderly Care				Limitation of elderly life	Towards the elderly Positive Discrimination	Negative Discrimination	*AAS
N	%			Median (min - max)	Median (min - max)	Median (min - max)	Median (min - max)
Gender	Female	345	86.2	31 (13-45)	26 (8-40)	18 (6-30)	73 (50-111)
	Male	55	13.7	31 (15-44)	29 (17-39)	18 (8-26)	74 (56-105)
	Statistical Analysis			Z=-0.671 p=0.502	Z=-1.811 p=0.070	Z=-0.537 p=0.591	Z=- 0.135 p=0. 893
Age				Mean±Sd 33.36±7.53	Median 33	Minimum 20	Maximum 52
	Statistical Analysis			r=-0.307 p<0.001	r=-0.357 p<0.001	r=0.096 p=0.55	r=-0.362 p<0.001
Educational Level	Basic nursing education	164	41	29 (13-44)	23.5 (8-40)	19 (6-30)	70 (50-98)
	Associate's degree	66	16.5	29 (16-43)	25 (17-38)	18 (8-24)	71 (55-98)
	Bachelor's degree	154	38.5	35 (13-45)	29.5 (16-40)	18 (6-26)	81.5 (54-111)
	Masters	16	4	37.5 (29-43)	30.5 (20-37)	18.5 (11-26)	88 (67-99)
	Statistical Analysis			H=75.141 p=0.001	H=48.303 p=0.001	H=2.724 p=0.436	H=76.626 p=0.001
Unit of employment	Clinic	232	58	31 (13-45)	26.5 (8-40)	19 (6-30)	74 (50-111)
	Intensive Care	136	34	31 (13-45)	26.5 (16-40)	18 (6-26)	72 (54-102)
	Polyclinic	32	8	34 (15-44)	28.5 (29-39)	18 (8-26)	73.5 (56-105)
	Statistical Analysis			H=8.98 p= 0.011	H=2.091 p= 0.351	H=4.428 p=0.109	H=12.321 p=0.002
Years of employment	Less than 1 year	13	3.2	35 (28-45)	31 (17-37)	18 (15-22)	83 (66-94)
	1-5 years	118	29.5	35.5 (15-45)	29.5 (16-40)	18 (6-26)	82.5 (54-111)
	6-10 years	105	26.2	31 (13-44)	28 (15-40)	17 (6-26)	72 (50-105)
	11-15 years	81	20.2	28 (15-40)	24 (16-38)	19 (8-25)	70 (54-97)
	16 years or more	83	20.7	30 (15-43)	24 (8-38)	20 (8-30)	72 (55-107)
Statistical Analysis			H=61.225 p=0.001	H=38.171 p=0.001	H=21.389 p= 0.001	H=60.974 p= 0.001	
Live in the Same House with Elderly Person	Yes	239	59.7	30 (13-45)	24 (8-40)	19 (6-30)	71(50-102)
	No	161	40.2	35 (15-45)	28 (17-40)	18 (6-26)	80 (54-111)
	Statistical Analysis			Z= -6.818 p=0.001	Z=-3.677 p=0.001	Z= -0.051 p=0.959	Z=-6.652 p=0.001
Care for elderly person	Yes	74	30.9	29 (13-42)	29.5 (16-40)	17 (6-26)	73 (55-102)
	No	165	69	30 (13-45)	23 (8-40)	19 (6-30)	71 (50-98)

<b>in the house (n=239)</b>	<b>Statistical Analysis</b>			Z=-0.612 p=0.540	Z=-4.886 p=0.001	Z=-3.362 p=0.001	Z=-1.543 p=0.123
<b>Care for elderly in working life</b>	<b>Yes</b>	322	80.5	31 (13-45)	26.5 (8-40)	18 (6-30)	73 (50-111)
	<b>No</b>	78	19.5	31 (15-44)	28 (16-39)	18 (6-26)	75.5(54-105)
	<b>Statistical Analysis</b>			Z=- 0.834 p=0.404	Z= -1.539 p=0.124	Z=-0.448 p=0.654	Z=-1.182 p=0.237
<b>Care for elderly in clinic of employment</b>	<b>Yes</b>	316	79	31(13-45)	26 (8-40)	19 (6-30)	73 (50-111)
	<b>No</b>	84	21	34.5 (15-45)	31 (18-39)	18 (6-25)	78.5(54-102)
	<b>Statistical Analysis</b>			Z=-1.468 p=0.142	Z=-4.565 p=0.001	Z=-2.785 p=0.005	Z=-1.667 p=0.095
<b>Received training about geriatric care</b>	<b>Yes</b>	156	39	35.5(13-45)	30(16-40)	18(6-26)	82(55-111)
	<b>No</b>	244	61	29(13-44)	24(8-40)	19(6-30)	71(50-103)
	<b>Statistical Analysis</b>			Z=-8.333 p=0.001	Z=-7.703 p=0.001	Z=-1.448 p=0.148	Z=-8.666 p=0.001

AAS: Elderly Discrimination Attitude Scale; H: Kruskal–Wallis H Test; Z: Mann–Whitney U Test; r: Spearman's correlation coefficient

**Table 2. CBS-24 Mean Points According to Demographic Data and Nurses Opinions on Elderly Care (n=400)**

Demographics and Nurses Opinions on Elderly Care		N	%	Security Median (min - max)	Knowledge– Skill Median (min - max)	Respectful Median (min - max)	Attach ment Median (min - max)	*CBS-24 Median (min – max)
Gender	Female	345	86.3	4.88(3-6)	5 (3-6)	5 (3-6)	5 (3-6)	4.96(3-6)
	Male	55	13.8	5(3.13-6)	5.2 (3.8-6)	5(4-6)	5 (3.4-6)	5.04(3.71-6)
	Statistical Analysis			Z= -0.346 p=0.73	Z =-1.219 p=0.223	Z=-1.751 p=0.08	Z=- 1.038 p=0.299	Z =-1.167 p=0.243
Age				Mean±Sd 33.36±7.53	Median 33	Minimum 20	Maximum 52	
	Statistical Analysis			r =-0.137 p=0.006	r =-0.245 p<0.001	r =-0.229 p<0.001	r =- 0.181 p<0.001	r =-0.219 p<0.001
Educational Level	Basic nursing education	164	41	4.75 (3-6)	4.8(3-6)	5(3-6)	4.9(3-6)	4.85 (3-6)
	Associate’s degree	66	16.5	4.63(3.13-6)	4.8 (3.8-6)	4.83(3.83-6)	4.6 (3.4-6)	4.73(3.71-6)
	Bachelor’s degree	154	38.5	5(3.63-6)	5.4(3.8-6)	5(3.5-6)	5 (3-6)	5.08(3.96-6)
	Masters	16	4	5.25(3.38-6)	6(4.2-6)	5.17(3.5-6)	5 (3.2-6)	5.27(3.67-6)
	Statistical Analysis			H=23.674 p=0.001	H=45.348 p=0.001	H=15.533 p=0.001	H=11.4 34 p=0.01	H= 27.787 p=0.001
Unit of employment	Clinic	232	58	5 (3-6)	5.1(3-6)	5 (3-6)	5(3-6)	5(3-6)
	Intensive Care	136	34	4.75(3.38-6)	5(3.8-6)	5(3.5-6)	4.8 (3-6)	4.83(3.67-6)
	Polyclinic	32	8	4.88(3.63-6)	5.3 (3.8-6)	5(4.17-6)	4.9 (3.8-6)	5(4.13-6)
	Statistical Analysis			H=7.022 p=0.03	H=3.717 p=0.156	H=0.572 p=0.751	H=1.26 1	H=4.021 p=0.134

		p=0.532						
<b>Years of employment</b>	<b>Less than 1 year</b>	13	3.25	5(4.13-5.88)	5.4 (4-6)	5 (4.67-6)	5(4.2-5.8)	5(4.54-5.92)
	<b>1-5 years</b>	118	29.5	5(3.13-6)	5.4 (3.8-6)	5.17(3.67-6)	5(3-6)	5.08(3.71-6)
	<b>6-10 years</b>	105	26.3	4.88(3.63-6)	5 (3.8-6)	5 (3.5-6)	5(3.2-6)	4.92(4-6)
	<b>11-15 years</b>	81	20.3	4.75(3.38-6)	4.8(3.8-6)	4.67(3.5-6)	4.6(3.2-6)	4.63(3.675,92)
	<b>16 years or more</b>	83	20.8	5(3-6)	5 (3-6)	4.83(3-6)	4.8 (3-6)	4.92(3-6)
	<b>Statistical Analysis</b>			H=20.233 p=0.001	H=36.329 p=0.001	H= 27.31 p=0.001	H=17.3 p=0.002	H=29.698 p=0.001
<b>Live in the same house with elderly person</b>	<b>Yes</b>	239	59.7	4.88(3-6)	5(3-6)	5 (3-6)	5 (3-6)	4.88(3-6)
	<b>No</b>	161	40.2	5(3.13-6)	5.2(3.8-6)	5(3.5-6)	5 (3-6)	5.04(3.67-6)
	<b>Statistical Analysis</b>			Z=-2.554 p=0.011	Z=-3.687 p=0.001	Z=-1.729 p=0.084	Z=-1.127 p=0.260	Z=-2.458 p=0.014
<b>Care for elderly person in the house (n=239)</b>	<b>Yes</b>	74	30.9	4.94(3.63-6)	5(3.8-6)	5(3.67-6)	5(3.4-6)	4.92(4-6)
	<b>No</b>	165	69	4.88(3-6)	5(3-6)	5(3-6)	4.8(3-6)	4.88(3-6)
	<b>Statistical Analysis</b>			Z=-0.029 p= 0.976	Z=-0.703 p=0.482	Z=-0.475 p=0.635	Z=-0.853 p=0.394	Z=-0.486 p=0.627
<b>Care for elderly in working life</b>	<b>Yes</b>	322	80.5	4.88(3-6)	5(3-6)	5(3-6)	5(3-6)	4.94(3-6)
	<b>No</b>	78	19.5	5(3.13-6)	5.2(3.8-6)	5(3.67-6)	5(3.4-6)	5.04(3.71-6)
	<b>Statistical Analysis</b>			Z=-0.879 p=0.379	Z=-1.54 p=0.124	Z=-0.918 p=0.358	Z=-0.936 p=0.349	Z=-1.28 p=0.201
<b>Care for elderly in clinic of employment</b>	<b>Yes</b>	316	79.0	4.94(3-6)	5.04(5-3)	4.91(5-3)	4.8(3-6)	4.92(3-6)
	<b>No</b>	84	21.0	5(3.13-6)	5.22 (5.2-3.8)	5.08 (5.17-3.5)	5.1(3.2-6)	5.06(3.71-6)
	<b>Statistical Analysis</b>			Z=-0.099 p=0.921	Z =-2.13 p=0.033	Z=-2.258 p=0.024	Z=-2.455 p=0.014	Z=-1.741 p=0.082



	<b>Yes</b>	156	39	5.13(3.13-6)	5.6(3.8-6)	5.17(3.5-6)	5(3-6)	5.17(3.67-6)
<b>Received training about geriatric care</b>	<b>No</b>	244	61	4.75(3-6)	4.8(3-6)	4.83(3-6)	4.8(3-6)	4.75(3-6)
	<b>Statistical Analysis</b>			Z =-5.255 p=0.001	Z=-6.792 p=0.001	Z=-4.383 p=0.001	Z=-3.663 p=0.001	Z =-5.811 p=0.001

CBS-24: Care Behaviour Scale-24; H: Kruskal–Wallis H Test; Z: Mann–Whitney U Test; r: Spearman's correlation coefficient



**Table 3. Correlation of AAS and CBS-24 Total and Sub-Scales Points for Nurses**

Elderly Discrimination Attitude Scale	Care Behaviour Scale									
	Security		Knowledge and Skills		Being Respectful		Attachment		Care Behaviour Scale Total	
	r	P	R	p	r	P	r	p	r	p
<b>Limitation of Elderly Life</b>	0.322	0.001	0.454	0.001	0.172	0.001	0.107	0.033	0.305	0.001
<b>Positive Attitude to Elderly Discrimination</b>	0.149	0.003	0.265	0.001	0.330	0.001	0.301	0.001	0.288	0.001
<b>Negative Attitude to Elderly Discrimination</b>	0.155	0.002	0.031	0.53	-0.044	0.376	-0.06	0.234	0.036	0.469
<b>Elderly Discrimination Attitude Scale Total</b>	0.334	0.001	0.424	0.001	0.199	0.001	0.133	0.008	0.315	0.001

AAS: Elderly Discrimination Attitude Scale; CBS-24: Care Behaviour Scale-24

## Discussion

There may be individual barriers due to their personal characteristics, social barriers arising from their social environment, and institutional barriers arising from business life that affect nurses' attitudes towards elderly individuals.

In this study, as the age of nurses increased, the AAS total score reduced ( $r=-0.362$ ;  $p<0.001$ ). As age increased, positive attitudes towards the older people reduced. In one study was found a statistically significant difference in positive discrimination points with age that involved students attending a health vocational college. (Senturk, Alkanat, Keskin, 2020) As age advances, physical and mental burnout occurs. Whilst burnout impacts negatively upon staff members, research has suggested that quality of care is impacted, with levels of patient satisfaction lower in hospitals where nurses experience high levels of burnout. (Zhou et al., 2015) In this study, the negative change in attitudes towards the older people as age increased may be related to these reasons. Some similar studies in the literature stated that age did not affect attitudes to the older people. (Demiray & Dal Yilmaz, 2017; Kolcu & Kucuk Kalindemirtas, 2017; Köse et al., 2015) The

attitudes of nurses who had bachelor and master's degree were found to be more positive than those who were basic nursing education and associate's degree. In one study, it was reported that nurses with a master's degree were almost three times more likely to report positive attitudes than both nurses of bachelor and basic nursing education. (Liu et al., 2015) In the literature, there are many studies reporting that education increases positive attitudes towards ageing. (Kissal & Okan, 2018; Pekince et al., 2018) The increase in educational level ensures development of maturity and awareness levels with age. Nurses working in intensive care units were identified to have lower positive attitudes towards the older people compared with those working in the wards ( $p<0.05$ ). In one study ( $n=217$ ) that uses a different scale revealed that nurses working in special units (surgery and intensive care) had more negative attitudes towards the older people ( $p<0.05$ ), which is parallel with the results of this study. (Pehlivan & Vatansever, 2019) This result of our study is considered to be due to the care requirements of patients with one or more system failures and caring for geriatric individuals with high mortality rates by nurses working in intensive care units. This causes fatigue.

The years of employment of nurses affected attitudes towards older people individuals ( $p < 0.05$ ). Nurses who have been employed for 6 years or more had low positive attitudes towards the older people. In one study involving health professionals working in state hospitals ( $n = 242$ ) revealed a significant difference in limitations of life for the older people sub-scales points with years of employment ( $p < 0.05$ ). As the number of work years increased for nurses, negative attitudes towards the older people developed. (Pekince et al., 2018) This result is considered to be due to increased years of employment leading to situations like exhaustion, burnout and anxiety as well as drop in work satisfaction and motivation.

In this study, nurses living in the same home with and involved in the care of older people individuals were found to have more positive attitudes towards the older people ( $p < 0.05$ ). Caring for the older people in the clinical setting where nurses are currently employed in revealed low positive discrimination sub-scales points, which displayed a significant difference ( $p < 0.05$ ). Many similar studies in the literature state that caring for older people individuals in the clinical setting positively affects attitudes towards the older people, which is different from the results of our study. (Altay & Aydin, 2015; Ozdemir & Bilgili, 2016) In our study, caring for older people individuals who lives in the same house increased positive attitudes, whereas in clinical settings, this situation reduced positive attitudes. Personal, occupational and environmental characteristics of nurses affect their attitudes towards the older people. It is thought that the difference between other studies in the literature may be due to personnel problems and cultural differences in the organizations.

It appeared nurses who had not received training on older people care had negative attitudes towards the older people. In the literature, there are many studies about how education increases positive attitudes. (Kolcu & Kucuk Kalindemirtas, 2017; Tufan et al., 2015) Education positively changes attitudes towards the older people, and as a result, it is considered necessary to increase training on ageing and geriatric care for nurses both as students and new Bachelor's degree.

As age increased, care behaviour was negatively affected ( $r = -0.219$ ;  $p < 0.001$ ). According to in a

similar study involving nurses working in a university and state hospital ( $n = 360$ ), as age increases, the care perception of nurses falls. (Erol, 2016) The increase in age may cause professional burnout, reduced physical power and increased chronic diseases, so it can be said that the care behaviour of nurses is negatively affected as their age increases. In the literature, it was stated that age had no effect on care behaviour in similar studies related to care behaviour of nurses, which is different from the results of our study. (Jaul, Barron, Rosenzweig, & Menczel, 2018; Yurun, 2015)

Nurses who were basic nursing education and associate's degree displayed low care behaviour ( $p < 0.05$ ). Increase in the educational level of nurses appeared to increase care perceptions. Increase in educational level provides an assurance that nurses develop professional knowledge and skills and are following current approaches. This situation increases professional satisfaction and develops the care perception of nurses ensuring that care quality reaches the desired levels. When care behaviour of nurses is evaluated in the literature, most studies concluded that educational level did not affect care behaviour, which is different from the results of our study. (Colak Okumus & Ugur, 2017; Erol, 2016; Yilmaz et al., 2017; Yurun, 2015)

Nurses employed in the profession for 11 years or more were observed to have lower care perceptions ( $p < 0.05$ ). A similar study revealed that nurses displayed higher care behaviour in the first 5 years in the profession, which dropped after 5 years. (Erol, 2016) As the years of employment in the profession increase, experiencing situations like burnout and fatigue are negatively reflected in care. This situation is thought to negatively affect the care behaviour of nurses. In one study investigating the effect of emotional intelligence levels on care behaviour of nurses ( $n = 172$ ) revealed that as years of employment increased, the knowledge-skill sub-scales points of nurses increased ( $p < 0.05$ ). (Colak Okumus & Ugur, 2017) A similar study in the literature stated that duration of employment did not affect care behaviour of nurses. (Yilmaz et al., 2017)

Nurses living with older people individuals were found to have lower care behaviour ( $p < 0.05$ ). Nurses currently caring for older people individuals in a clinical settings were found to

have low points for being respectful, knowledge–skills and attachment ( $p < 0.05$ ). Physical and mental limitations of older people individuals make providing care more difficult. This situation is considered to cause a drop in the quality of care provided by nurses to older people individuals.

Nurses participating in our study who did not receive training on geriatric care during education or after graduation were found to have lower care behaviour points ( $p < 0.05$ ). Training on geriatric care positively affected care behaviour of nurses. A study conducted in a nursing home ( $n = 53$ ) revealed that most employees in the nursing home received training related to ageing and geriatric care and that training positively affected geriatric care. (Utkualp et al., 2015) It is considered that increasing training related to geriatric care both during nursing education and after graduation and encouraging participation of nurses will affect care of older people individuals in a very positive manner.

According to the results of our study, the CBS-24 security sub-scales points and AAS total and all sub-scales points had positive correlations ( $p < 0.05$ ). The increase in security points increased positive attitudes towards the older people. The mutual relationships between nurse and patient founded in trust and comfort is thought to reflect in the attitudes and care of the older people. Knowledge–skill, being respectful and attachment sub-scales points of nurses and the AAS total points were found to have a positive correlation with limitations of life and positive discrimination sub-scales points ( $p < 0.05$ ). The CBS-24 total points were found to have a positive correlation with limitations of life in the older people and positive discrimination towards the older people sub-scales points ( $p < 0.05$ ). In the nursing practice, it is thought that care of the older people will effectively reflect the development of professional nursing with scientific and smart understanding. The increase in the limitation of life of the older people sub-scales points with the increase in positive approach is estimated to mean that they do not play an effective role in the social life of older people people, and this approach is due to not being adopted by the society.

Our study was conducted with the aim to evaluate the effect of nurses' attitudes on their care behaviour towards older people individuals.

Nurses participating in our study were found to have a significant and positive correlation between CBS-24 total points and AAS total points ( $r = 0.315$ ;  $p < 0.001$ ). As the AAS total points increased, the CBS-24 total points increased. According to the results of our study, it can be concluded that nurses having positive attitudes towards older people individuals will increase the quality and efficacy of care. The increase in the quality of care for geriatric individuals will ensure an increase in physiological, psychological and social aspects of healthy older people individuals. As a result, the approach of nurses, with a key role in the health area for many sections of society, towards older people individuals is very important for the efficacy of professional nursing care.

It was found that the gender of the nurses participating in our study did not affect the scale scores ( $p > 0.05$ ). Most studies in the literature support the result of our study. (Demiray and Yilmaz 2017; Soyuer 2010 ). While it is expected that women's attitudes will be more positive with the mother figure imposed by the society, in our study and similar studies in the literature, the reason why gender does not affect; It can be thought that it is due to the fact that both genders are equally affected by the traditional structure of the society.

**Conclusion:** In our study, the work conditions of nurses (years of employment, type of employment and weekly working hours) affected the quality of care provided to geriatric patients. To increase the quality of geriatric care by nurses, it is recommended that planning of programmes be considered in these conditions.

**Implications for Nursing Practice:** According to the results of the study, the attitude towards the older people is reflected in nursing care. The level of education and general education related to the care of the older people individual affect both the care behaviors and the attitude towards the older people. For this reason, the content of topics related to aging and older people care should be increased, especially in nursing education and post-graduate in-service training. Certificate programs, congresses and seminars on old age and older people care should be increased and participation should be encouraged.

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