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# The Effect of Ageism and Willingness of Older Adult Care On Caring Behaviors Among New Graduate Nurses: A Descriptive, Correlational Study

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ABSTRACT

**Objective:** Despite the increasing ageing population, caring for older adults is not a highly preferred field of nursing in Türkiye and the world; studies examining the attitudes and behaviors of new graduate nurses towards older adult care are particularly limited. This study explored the effect of ageism and the willingness of older adult care on caring behaviors among new graduate nurses.

**Methods:** A descriptive, correlational study was conducted on 225 new graduate nurses in four private hospitals affiliated with a university. Data were collected using a self-administered questionnaire, including a personal characteristics form, the Fraboni Scale of Ageism, the Willingness to Care for Older People Scale, and the Caring Behaviors Inventory-24. Data were analysed using descriptive tests, comparative tests, correlation analysis, and regression analysis.

**Results:** Willingness of older adult care, discrimination, age, professional experience, receiving a course on gerontology, and living with an older adult accounted for 46.2% of the variance of caring behaviors ($R=0.68$; $R^2=0.46$; $F=31.226$; $P<.001$).

**Conclusion:** This study suggests the need for evidence-based gerontology course interventions to promote caring behaviors towards older adults and reduce age discrimination.

**Keywords:** Aged, ageism, age discrimination, geriatric nursing, nurses.

## INTRODUCTION

The global elderly population is projected to double from 12% to 22% between 2015 and 2050, according to the World Health Organization (2017).[1] In Türkiye, the population aged 65 or over increased from 8.2% in 2015 to 9.5% in 2020 and is expected to reach 16.3% by 2040.[2] To meet the growing demand, Türkiye has increased its nursing workforce by almost 50% from 2015 to 2020, including new graduate nurses (NGNs), to provide care for older adults.[3] As such, examining the caring behavior and predictors of NGNs towards older adults is essential.

Caring behaviors involve listening, providing information, respecting privacy, supporting patients, empathising, being patient, having professional knowledge, encouraging participation, and providing adequate healthcare.[4] These behaviors are critical for safe and effective healthcare, especially for older adults with complex diagnoses.[5] However, communication barriers, such as visual, auditory, and cognitive changes, can increase stress levels for nurses, reducing their concentration on caring behavior.[6,7] Limited qualitative studies focus on NGNs' experiences in providing care for older adults. Hartung et al.[8] reported that NGNs often neglected the psychological needs of patients with dementia, provided inadequate care, and experienced feelings of fear and guilt. Lovin[9] identified four themes: lack of geriatric-specific content, necessity for more clinical experiences, unpreparedness for end-of-life care, and increased demand for older adult care. These studies suggested that nursing education should prioritise improving students' attitudes toward ageism and caring for older adults.[8,9]

Ageism is defined as ''attitudes and behaviors that express prejudice toward older adults and is a multidimensional concept consisting of positive and negative attitudes.[10] Evidence showed that nurses had considerable levels of attitudes toward ageism or older adults.[11-15] Major characteristics have influenced positively attitudes toward ageism or older adults in nurses: being female,[14,16] having a higher education level,[13,14,16,17] having shorter clinical

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experience,[18] working in public hospitals,[13,17] and living with an older adult.[14,17] Nurses' attitudes toward ageism or older adults were correlated with their knowledge level about ageing,[11,13,19] anxiety about ageing,[18] contacts with older adults,[18] and nursing competency.[15] A study showed negative attitudes toward older adults in Portugal, Canada, Ireland, and Australia among nursing students.[20] Most NGNs from Canada and the United States viewed older adults positively.[21,22] Attitudes towards ageism and older adults have been well-documented but not adequately studied in Türkiye or among NGNs worldwide.

Few studies have addressed the care provided by nurses and nursing students to older adults in the literature. A national study indicated that female nursing students living with or having extended family showed more positive attitudes towards older adult care.[23] However, Hong Kong and Mainland China nursing students ranked geriatric care as their least favourite.[24] The willingness to provide care for older adults was positively correlated with the frequency and quality of contact with older adults,[25] and inversely related to anxiety about ageing and attitudes toward older adults.[25,26] Nursing students consistently characterized working with older adults as physically demanding but not specialised.[27] Graduating nurse students with substantial work experience in healthcare, no plans for further study, higher nursing competency, and a firm belief in the societal value of nursing demonstrated the most significant interest in geriatric nursing.[28] Factors such as living with older adults, participating in a course in geriatric care, having experience providing care to older adults, and actively considering a career in geriatric nursing were significantly correlated with nursing students' interest in older adult care.[29] Additionally, almost one-third of Turkish nurses expressed their willingness to care for older adult care.[30]

In Türkiye, nursing students can participate in elective courses on gerontology, geriatric nursing, or older adult care. These courses cover physiological changes, chronic diseases, geriatric syndromes, emergencies, home care, and rehabilitation.[31] However, limited clinical practice and unstandardised course content can result in nursing students avoiding caring for older adults.[24-26,32] Little is known about caring behaviors toward older adults, attitudes toward ageism, and the willingness of older adult care among NGNs

## AIM

The study explored the effect of ageism and the willingness of older adult care on caring behaviors towards older adults among NGNs.

### Research questions

- What are NGNs' ageism, care willingness and caring behaviors towards older adults?
- What factors are associated with their caring behaviors towards older adults?

## METHODS

### Study Design

A descriptive, correlational study explored caring behaviors towards older adults among NGNs. The predictability of caring behaviors towards older adults was explained by ageism and the willingness of older adult care.

### Setting and Sample

In Türkiye, nurses must take a biennial exam to work in public and university hospitals, which is why NGNs mainly work in private hospitals. Therefore, four private hospitals affiliated with a university were selected for this study. These hospitals were similar in bed capacity and work environments. The online calculator was used to calculate a sample size (https://clincalc.com/stats/samplesize.aspx) based on a 95% confidence level and a 5% margin of error.[27] Two hundred fifty-six participants were recruited through random sampling, which exceeded the minimum sample size of 197 nurses. The extra 59 nurses were included, accounting for a 30% sampling error. As inclusion criteria for this study, NGNs had to have a bachelor's degree, provide direct nursing care, work full-time, and have between three months and a year of professional experience.

### Data Collection Tools

Researchers developed a form to study the personal characteristics of NGNs. This form includes questions about age, gender, marital status, years of professional experience, department, shift, living with an older adult, and receiving a course on gerontology. The willingness to re-choose nursing as a career and the preference to work in geriatric care units were evaluated with rating questions ranging from 0=never to 10=completely.

***The Fraboni Scale of Ageism*** was adapted into Turkish by Özel Bilim and Kutlu.[33] It consists of 29 items and three subscales: traditional beliefs, discrimination, and avoidance. The items are scored based on a four-point Likert-type scale ranging from 1 (strongly disagree) to 4 (strongly agree), with six reverse-scored items. The total score is the sum of all item scores, ranging from 29 to 116. A higher score indicates a higher level of ageism. The Cronbach's alpha coefficient for the Turkish version was 0.72.

***The Willingness to Care for Older Persons Scale*** was adapted into Turkish by Hançerlioğlu and Karadakovan[34] and consists of a single dimension with 12 items. Each item is responded to on a five-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree), with nine reverse-scored items. The total score is the sum of all item scores, ranging from 12 to 60. A higher score means a greater willingness for older adult care. The Cronbach's alpha coefficient for the Turkish version was 0.86.

***The Caring Behaviors Inventory-24*** was adapted into Turkish by Kurşun and Kanan[4] and consists of 24 items and four subscales: assurance, knowledge and skill, respectful, and connectedness. Each item is rated on a six-point Likert-type scale, ranging from (1) never, (2) rarely, (3) sometimes, (4) usually, (5) often, to (6) always. The total score at scale and subscale levels is calculated by summing the scores of all items and then dividing by the number of items. High scores indicate a higher perception of quality of care. The Cronbach's alpha coefficient for the Turkish version was 0.97.

### Data Collection

Researchers collected data between February and May 2023. They reached out to frontline nurse managers to obtain the weekly work schedules of NGNs in their units. NGNs were approached at the beginning of their day or night shifts and provided with a concise overview of the study. They were promptly handed an unmarked sealable envelope containing a self-administered questionnaire upon agreeing to participate. After completion, the NGNs sealed the questionnaires in the envelope. After their shifts, researchers collected the sealed envelopes from the NGNs or frontline nurse managers. A total of 256 self-administered questionnaires were distributed. Although all were returned, 21 were incomplete, resulting in 225 valid self-administered questionnaires. The response rate was an impressive 87.8%.

### Ethical Considerations

The study protocol was approved by the Non-Invasive Research Ethics Committee, Istanbul Medipol University (Date: 08.12.2022; Decision Number: 1055). In addition, study permissions were received from the nursing administration services of each hospital and from the authors who adapted the scales into Turkish for this study. Protections were assured by receiving informed consent from participants before data collection. Data were collected voluntarily and anonymously.

### Data Analysis

Data were analysed using Statistical Package for the Social Sciences (IBM SPSS Corp., Armonk, NY, USA) software version 25.0. Descriptive statistics were used to describe characteristics, caring behaviors towards older adults, ageism, and willingness of older adult care, including means with standard deviations and numbers with percentages. Independent samples t-test and one-way variance analysis determined differences in the caring behaviors towards older adults according to characteristics. Using the Pearson correlation, researchers identified the correlations between caring behaviors towards older adults, ageism, and willingness to older adult care. A stepwise regression model was performed with the dependent variable of caring behaviors towards older adults and the independent variables of characteristics, the willingness of older adult care, and three subscales of ageism. Cronbach's alpha coefficient calculated the internal consistency. A *P*-value of less than .05 was considered statistically significant.

## RESULTS

NGNs had an average age of 24.1 years (range 21-34 years; SD=2.3 years), and 47.1 % were older than 23 years. Most were female and single (Table 1).

**Table 1. Personal characteristics of new graduate nurses (n=225)**

| Personal Characteristics | Number | Percentage |
|---|---|---|
| **Age Groups** | | |
| ≤23 years | 119 | 52.9 |
| >23 years | 106 | 47.1 |
| **Gender** | | |
| Female | 179 | 79.6 |
| Male | 46 | 20.4 |
| **Marital Status** | | |
| Married | 36 | 16.0 |
| Single | 189 | 84.0 |
| **Professional Experience** | | |
| ≤5 months | 117 | 52.0 |
| >5 months | 108 | 48.0 |
| **Working Departments** | | |
| Specialty units | 49 | 21.8 |
| Inpatient units | 176 | 78.2 |
| **Working Shift** | | |
| Days | 99 | 44.0 |
| Nights | 45 | 20.0 |
| Rotating | 81 | 36.0 |
| **Willingness to re-choose nursing as a career** | | |
| ≤6 scores | 120 | 53.3 |
| >6 scores | 105 | 46.7 |
| **Living with an older person** | | |
| Yes | 108 | 48.0 |
| No | 117 | 52.0 |
| **Receiving a course on gerontology** | | |
| Yes | 92 | 40.9 |
| No | 133 | 59.1 |
| **Preference to work in older people units** | | |
| ≤5 scores | 116 | 51.6 |
| >5 scores | 109 | 48.4 |

**Table 2. Mean scores and correlation matrix of scales and subscales (n=225)**

| Scales and Subscales | Score Range | Mean ± SD | Cronbac's Alpha | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1. Willingness to Care for Older People Scale** | 12-60 | 31.40 ± 7.02 | 0.75 | 1 | | | | | | | | | |
| 2. Traditional beliefs | 17-68 | 42.39± 10.51 | 0.89 | -0.48* | 1 | | | | | | | | |
| 3. Discrimination | 8-32 | 20.47 ± 4.50 | 0.75 | -0.21* | 0.35* | 1 | | | | | | | |
| 4. Avoidance | 4-16 | 11.28 ± 2.84 | 0.81 | -0.11* | 0.31* | 0.12* | 1 | | | | | | |
| **5. Fraboni Scale of Ageism** | 29-116 | 74.14± 13.92 | 0.88 | -0.46* | 0.93* | 0.61* | 0.47* | 1 | | | | | |
| 6. Assurance | 1-6 | 5.14 ± 0.78 | 0.90 | 0.55* | -0.34* | -0.20* | -0.08 | -0.34* | 1 | | | | |
| 7. Knowledge and skill | 1-6 | 5.04 ± 0.94 | 0.85 | 0.47* | -0.32* | -0.18* | -0.08 | -0.32* | 0.67* | 1 | | | |
| 8. Respectful | 1-6 | 5.24 ± 0.85 | 0.84 | 0.54' | -0.32* | -0.25* | -0.01 | -0.33* | 0.75* | 0.72* | 1 | | |
| 9. Connectedness | 1-6 | 5.20 ± 0.82 | 0.84 | 0.52* | -0.24* | -0.26* | 0.06 | -0.25* | 0.69* | 0.63* | 0.87* | 1 | |
| **10. Caring Behaviors Inventory-24** | 1-6 | 5.14 ± 0.87 | 0.95 | 0.59* | -0.35* | -0.25* | -0.04 | -0.35* | 0.91* | 0.82* | 0.92* | 0.88* | 1 |

* Correlation is significant at the 0.01 level (2-tailed). SD: Standard deviation

Approximately half had more than five months of professional experience. NGNs primarily worked in inpatient units and day shifts. About half were willing to re-choose nursing as a career, scoring more than 6. Of those surveyed, 52% had an older adult living in their home. About three-fifths of them received a gerontology course during their undergraduate education. Of the respondents, 48.4% preferred working in older adult care units, scoring more than 5 (Table 1).

Ageism was moderate, with a mean score of 74.14±13.92. The subscales ranked from highest to lowest were avoidance (11.28±2.84), discrimination (20.47±4.50), and traditional beliefs (42.39±10.51). Care willingness for older adults was considered moderate, with a mean score of 31.40±7.02. Caring behaviors towards older adults were high, with a mean score of 5.14±0.87. The subscales ranked highest to lowest: respectful (5.24±0.85), connectedness (5.20±0.82), assurance (5.14±0.78), and knowledge and skill (5.04±0.94). The scales and all subscales (Cronbach's α 0.75–0.95) demonstrated acceptable reliability (Table 2).

Table 2 presents the correlation matrix for the scales. Willingness of older adult care was negatively correlated with ageism (r=-0.46; *P*<.001). Caring behaviors towards older adults had a significant correlation with ageism negatively (r=-0.35; *P*<.001) and with willingness of older adult care positively (r=0.59; *P*<.001).

Caring behaviors towards older adults were significantly higher among nurses who were 23 years and younger (*P*<.001), were female (*P*=0.031), had professional experience of more than five months (*P*<.001), worked in day shifts (*P*<.001), lived with an older adult in their home (*P*<.001), and received a course on gerontology during

**Table 3. Comparison of personal characteristics and caring behaviors of new graduate nurses (n=225)**

| Personal Characteristics | Caring Behaviors Inventory-24 | |
|---|---|---|
| | Mean ± SD | Test and *P* |
| **Age Groups** | | |
| ≤23 years | 4.94±0.85 | **t=-4.232** |
| >23 years | 5.36±0.64 | **<.001** |
| **Gender** | | |
| Female | 5.20±0.78 | **t=2.171** |
| Male | 4.92±0.77 | **.031** |
| **Marital Status** | | |
| Married | 4.91±0.85 | t=-1.967 |
| Single | 5.19±0.76 | 0.051 |
| **Professional Experience** | | |
| ≤5 months | 4.97±0.87 | **t=-3.601** |
| >5 months | 5.33±0.82 | **<.001** |
| **Working Departments** | | |
| Specialty units | 5.15±0.70 | t=0.141 |
| Inpatient units | 5.14±0.81 | .889 |
| **Working Shift** | | |
| Days | 5.39±0.63 | **F=9.617** |
| Nights | 4.96±0.75 | **<.001** |
| Rotating | 4.94±0.89 | |
| **Willingness to re-choose nursing as a career** | | |
| ≤6 scores | 5.19±0.75 | t=0.939 |
| >6 scores | 5.09±0.82 | .349 |
| **Living with an older person** | | |
| Yes | 5.33±0.66 | **t=-3.645** |
| No | 4.96±0.85 | **<.001** |
| **Receiving a course on gerontology** | | |
| Yes | 5.29±0.71 | **t=-2.459** |
| No | 5.03±0.82 | **.015** |
| **Preference older people units** | | |
| ≤5 scores | 5.15±0.71 | t=0.250 |
| >5 scores | 5.13±0.86 | .803 |

t, Independent samples t-test; F, One-way analysis of variance; SD, Standard deviation

undergraduate education (*P*=0.015). There was no significant difference between the caring behaviors towards older adults and other personal characteristics (*P*>.05) (Table 3).

As seen in Table 4, six models were created. In Model 6, only six variables were statistically significant, explaining 46.2% of the variance of caring behaviors towards older adults. Care willingness for older adults (β=0.52; *P*<.001), professional experience β=-0.14; *P*=.007), receiving a course on gerontology (β=0.13; *P*=0.013), age groups (β=-0.15; *P*=0.005), discrimination (β=-0.12; *P*=0.016), and living with an older adult (β=0.11; *P*=0.04) were statistically significant predictors. Being more willing to care for older adults, having more than five months of professional experience, receiving a course on gerontology, being older than 23 years, having a negative attitude toward discrimination, and living with an older adult positively affect caring behaviors towards older adults among NGNs.

**Table 4. The stepwise regression: significant predictors of caring behaviors for older adults (n=225)**

| Model | Variables | B | SE | β | t | *P* | 95.0% Confidence Interval for B | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Lower Bound | Upper Bound |
| 1 | (Constant) | 3.062 | 0.195 | | 15.733 | **<.001** | 2.678 | 3.445 |
| | Willingness to Care for Older People Scale | 0.066 | 0.006 | 0.592 | 10.973 | **<.001** | 0.054 | 0.078 |
| 2 | (Constant) | 3.262 | 0.196 | | 16.686 | **<.001** | 2.877 | 3.648 |
| | Willingness to Care for Older People Scale | 0.065 | 0.006 | 0.583 | 11.126 | **<.001** | 0.054 | 0.077 |
| | Professional Experience (≤5 months) | -0.322 | 0.082 | -0.205 | -3.909 | **<.001** | -0.484 | -0.160 |
| 3 | (Constant) | 3.423 | 0.198 | | 17.292 | **<.001** | 3.033 | 3.814 |
| | Willingness to Care for Older People Scale | 0.065 | 0.006 | 0.582 | 11.343 | **<.001** | 0.054 | 0.077 |
| | Professional Experience (≤5 months) | -0.327 | 0.081 | -0.208 | -4.058 | **<.001** | -0.486 | -0.168 |
| | Receiving a course on gerontology (Yes) | 0.263 | 0.082 | 0.165 | 3.214 | **.002** | 0.102 | 0.425 |
| 4 | (Constant) | 3.570 | 0.203 | | 17.572 | **<.001** | 3.170 | 3.971 |
| | Willingness to Care for Older People Scale | 0.063 | 0.006 | 0.564 | 11.050 | **<.001** | 0.052 | 0.075 |
| | Professional experience (≤5 months) | -0.252 | 0.085 | -0.160 | -2.982 | **.003** | -0.419 | -0.086 |
| | Receiving a course on gerontology (Yes) | 0.271 | 0.081 | 0.170 | 3.355 | **.001** | 0.112 | 0.431 |
| | Age groups (≤23 years) | -0.225 | 0.085 | -0.143 | -2.632 | **.009** | -0.393 | -0.057 |
| 5 | (Constant) | 4.107 | 0.301 | | 13.638 | **<.001** | 3.514 | 4.701 |
| | Willingness to Care for Older People Scale | 0.060 | 0.006 | 0.537 | 10.356 | **<.001** | 0.049 | 0.072 |
| | Professional Experience (≤5 months) | -0.223 | 0.085 | -0.142 | -2.633 | **.009** | -0.389 | -0.056 |
| | Receiving a course on gerontology (Yes) | 0.268 | 0.080 | 0.168 | 3.354 | **.001** | 0.111 | 0.426 |
| | Age groups (≤23 years) | -0.249 | 0.085 | -0.158 | -2.923 | **.004** | -0.417 | -0.081 |
| | Discrimination | -0.022 | 0.009 | -0.124 | -2.394 | **.018** | -0.040 | -0.004 |
| 6 | (Constant) | 4.041 | 0.301 | | 13.442 | **<.001** | 3.448 | 4.633 |
| | Willingness to Care for Older People Scale | 0.059 | 0.006 | 0.522 | 10.055 | **<.001** | 0.047 | 0.070 |
| | Professional Experience (≤5 months) | -0.229 | 0.084 | -0.146 | -2.723 | **.007** | -0.394 | -0.063 |
| | Receiving a course on gerontology (Yes) | 0.211 | 0.084 | 0.132 | 2.515 | **.013** | 0.046 | 0.377 |
| | Age groups (≤23 years) | -0.238 | 0.085 | -0.151 | -2.811 | **.005** | -0.405 | -0.071 |
| | Discrimination | -0.022 | 0.009 | -0.125 | -2.422 | **.016** | -0.040 | -0.004 |
| | Living with an older person | 0.173 | 0.084 | 0.110 | 2.069 | **.040** | 0.008 | 0.338 |

B, Unstandardized regression coefficient; SE, Standard error; β, Standardized regression coefficient; t, t statistic (B/SE)

## DISCUSSION

The population of older adults is increasing, leading to higher hospital visits. Due to a nursing shortage, more NGNs are employed. However, limited studies are focused on the NGN sample. Therefore, this study focused on the level of NGNs' ageism, willingness of older adult care, and caring behaviors towards older adults.

Ageism was moderate among NGNs in this study, with nurses in Russia, Jordan, Ghana, and South Korea reporting a higher positive attitude towards ageism.[12,13,16,18] Nurses in Malta, China, and Ethiopia had moderate positive attitudes towards older adults.[11,14,19] Further studies are needed to understand the similarities and differences, which could be attributed to cultural values, ageing population rates, and gerontology education. International studies show no significant differences in attitudes towards older adults based on nurses' characteristics, including age and experience, and this is also reflected in the NGNs sample. NGNs had slightly less positive attitudes than nurses and nursing students in the United States of America before the COVID-19 pandemic.[22] Before the COVID-19 pandemic,

most Canadian NGNs positively viewed older adults.[21] A study in Türkiye during COVID-19 found that nurses' positive attitudes towards older adults were correlated with their age and professional experience.[35] A recent study conducted in Türkiye found low levels of ageism among senior nursing students.[36] During the COVID-19 pandemic, NGNs may have had limited experience with older adult care due to online education. During the transition into practice, NGNs with limited professional knowledge and skills realise that caring for older adults is complex and common.[32] The negative impact of the COVID-19 pandemic on the existing shortcomings of NGNs concerning older adult care can explain this.

In this study, care willingness for older adults was moderate, and 51.6% of NGNs rated the preference of working in geriatric care units with a score of 5 or less. Canadian nursing students wanted to work in geriatric settings toward retirement because, in their view, caring for older adults was heavy work but not high acuity.[27] Jang et al.[25] reported that American nursing students were more willing to care for older adults than Korean students. In a study conducted in six European countries, student nurses' interest in geriatric nursing was low, especially in Germany and Lithuania.[28] A meagre rate of student nurses in Hong Kong and those in Mainland China ranked caring for older adults as their first choice.[24] A multi-country survey highlighted that student nurses in Chile, India, and the Philippines were more likely to be willing to care for older adults.[27] Only 14% of Canadian NGNs were willing to work in a geriatric care setting.[21] In Türkiye, student nurses avoid geriatric nursing due to lacking skills, negative clinical experiences, and low pay incentives.[29] Nearly one-third of Turkish nurses were willing to care for older adults.[30] A recent study conducted in Türkiye found high levels of care willingness for older adults among senior nursing students.[36] According to these studies, nursing students in most countries may be less willing to care for older adults. This may lead to a future shortage of healthcare professionals in geriatric healthcare settings.

The literature has limited studies examining nurses' caring behaviors toward older adults. Iranian intensive care unit nurses showed high caring behaviors towards older adults,[5] while Egyptian geriatric nurses exhibited moderate caring behaviors.[7] American nurses' caring behaviors towards hospitalised older adults were also high.[6] Turkish nursing students had higher caring behaviors toward older adults.[23] Mainland China students had the highest perception, while Saudi Arabia students had the lowest.[26] As a result, the high caring behaviors towards older adults in this study are consistent with those of previous studies.

The strongest predictor was a caring willingness for older adults. Previous studies with nursing students reported a positive correlation between willingness of older adult care and caring behaviors or perceptions toward older adults.[23,24,26] A study found a positive correlation between student nurses' quality of contact with older adults and their willingness to care for them.[25] In another study, nursing students interested in geriatric nursing had higher self-reported competence levels.[28] In previous studies, ageism has been a predictor of and negatively associated with the willingness of older adult care.[23,25,26,30] Also, attitudes toward discrimination significantly predict caring behaviors in this study. Discrimination, a subscale of the Fraboni Ageism of Scale, includes everyday life and represents age discrimination in subjects such as exercising, driving, building friendships, and having an income. A study found that student nurses' attitudes towards caring for older adults negatively correlate with their contact with them.[25] A recent study conducted in Türkiye found a correlation between positive ageism and high care willingness for older adults among nursing students.[36] Willingness of older adult care is crucial and negatively associated with ageism. Increasing willingness and reducing ageism among NGNs can improve care quality, safety, and effectiveness for older adults.

NGNs older than 23 years had more positive, caring behaviors towards older adults. Younger nurses may be less experienced and less skilled in coping with older adults' psychological and social aspects of care. Having more than five months of professional experience positively affects caring behaviors towards older adults among NGNs. This result is consistent with previous studies focusing on interest in geriatric nursing and ageism.[28,35] NGNs with more than five months of professional experience can better understand older adults' health and social needs because they interact more with them and have more professional knowledge and skills.

Receiving a course on gerontology was another significant predictor. Smith et al.[21] reported that NGNs who completed multiple geriatric-focused clinical placements were more likely to report an intention to work in geriatric settings. Participating in a course related to gerontology resulted in higher attitudes toward older adults in Malta.[19] This result highlights the importance of providing NGNs with courses that will further strengthen their knowledge, skills, and attitudes toward older adults to improve the quality of their care.

Living with an older adult in their homes was the weakest of the significant predictors. Positive ageism levels decreased significantly as the number of older adults living

in the same household in Jordan increased.[17] The experience of being cared for by older adults and relationships with older adults was associated with registered nurses' attitudes in China.[11] Lived with older adults was significantly related to positive attitudes in Ethiopia.[14] As a result, living with an older adult may help understand older adults more accurately, decrease ageism, and increase caring behaviors towards older adults.

**Limitations**

The results of this study need to be interpreted considering some limitations. First, this study was conducted with a cross-sectional design, which cannot provide any causal explanations. Second, data were collected from four private hospitals in a city, which limits the generalisability of the results. Third, the random sample method, which is from improbable sampling methods, was used in this study. A self-administered questionnaire was used as an instrument; hence, the result may be affected by psychological mechanisms and social desirability bias. However, the sample was sufficient, the response rate was high, and the instruments showed high internal consistency (Cronbach's alpha coefficient: 0.72-0.97).

NGNs had moderate ageism and a high willingness of older adult care, while their caring behaviors towards older adults were high. Their caring behaviors towards older adults were influenced by their willingness for older adults and age discrimination. Age, professional experience, receiving a course on gerontology during undergraduate education, and living with an older adult were characteristics that predicted caring behaviors.

NGNs need evidence-based gerontology courses to better care for older adults. Courses should cover older adults' physiological, psychological, and social traits, reduce age discrimination, and increase willingness to provide care. Moreover, older NGNs with more professional experience who have received a course on gerontology and have lived with older adults may have better caring behaviors towards older adults, which may support peer education. Nurse managers should consider developing strategies to improve caring behaviors towards older adults in geriatric nursing. One possible approach to implement is providing mentoring programs that focus on gerontology nursing for NGNs. Given that caring behaviors were significantly associated with ageism and willingness in this study, future research should investigate how NGNs' personal beliefs and cultural values influence these factors, and whether targeted educational interventions can strengthen caring attitudes in geriatric care settings.

**Ethics Committee Approval:** Ethics committee approval was obtained from Istanbul Medipol University Non-Interventional Clinical Research Ethics Committee (Date: 08.12.2022, Number: 1055)

**Informed Consent:** Following detailed information about the study, verbal informed consent was obtained from all new graduated nurses.

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