

# Nursing Students' Attitudes Toward the Elderly: A Systematic Review Based on Studies Conducted in Türkiye\*

## Hemşirelik Öğrencilerinin Yaşlı Bireylere Yönelik Tutumları: Türkiye'de Yapılan Çalışmalara Dayalı Sistematik Bir Derleme

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### ABSTRACT

The older population is increasing rapidly in the world and this increase brings along problems that need to be solved due to old age. Ageism, which is one of these problems, is a stereotyping, prejudice, and discrimination against people on the basis of their age. Ageism has serious negative consequences for older people's health and well-being. Nursing is one of the main professions to care for older people and nursing students will be potential members of this profession in the future. For this reason, it is important to know nursing students' attitudes toward ageism and the factors affecting it. This study aims to determine nursing students' attitudes toward older adults by examining studies conducted in Türkiye. The review was conducted between September and November 2021 using search databases of Google Academics, PubMed, ProQuest, and Turkey Citation Index. In the search, the keywords "nursing students", "attitude towards elderlies", "elderly discrimination", "ageism," and "Turkey" were used in different combinations in Turkish and English. Of the 5,443 studies identified at baseline, 35 were included in the study. The sample of the studies consisted of 10,636 nursing students. In the studies reviewed, the Ageism Attitude Scale (AAS), the Kogan's Attitudes Toward Old People Scale (Kogan OP Scale), and the UCLA Geriatrics Attitudes (UCLA-GA) scale were used to assess ageism. According to the results of this systematic review, nursing students' attitudes toward the elderly were mostly positive, and various factors were associated with these attitudes. It is recommended to include courses on elderly health in the nursing undergraduate curriculum, to carry out projects to increase interaction with the elderly, and to conduct experimental studies aiming to demonstrate the effectiveness of various interventions to increase positive attitudes.

**Keywords:** Elderly, attitude toward elderlies, ageism, nursing student

**ÖZ**

Dünyada yaşlı nüfus hızla artmakta ve bu artış yaşlılık nedeniyle çözülmesi gereken sorunları da beraberinde getirmektedir. Bu sorunlardan birisi olan yaşlı ayrımcılığı, insanlara yaşlarına dayalı olarak gösterilen klişeleştirme, önyargı ve ayrımcılık içeren davranışlar olarak tanımlanmaktadır. Yaş ayrımcılığının yaşlı insanların sağlığı ve iyilik hali üzerinde ciddi olumsuz sonuçları vardır. Hemşirelik, yaşlılara bakım veren temel mesleklerden birisidir ve gelecekte hemşirelik öğrencileri bu mesleğin potansiyel birer üyesi olacaktır. Bu nedenle hemşirelik öğrencilerinin yaşlı ayrımcılığına yönelik tutumlarının ve bunu etkileyen faktörlerin bilinmesi önemlidir. Bu araştırma, Türkiye’de yapılan çalışmaları inceleyerek hemşirelik öğrencilerinin yaşlı yetişkinlere yönelik tutumlarını belirlemeyi amaçlamıştır. İnceleme, Eylül ve Kasım 2021 arasında Google Academics, PubMed, ProQuest ve Turkey Citation Index arama veri tabanları kullanılarak yapılmıştır. Araştırmada “hemşirelik öğrencileri”, “yaşlılara karşı tutum”, “yaşlı ayrımcılığı”, “ageism” ve “Türkiye” anahtar kelimeleri Türkçe ve İngilizce olarak farklı kombinasyonlarda kullanılmıştır. Başlangıçta belirlenen 5443 çalışmadan 35’i çalışmaya dahil edilmiştir Çalışmaya dahil edilen araştırmaların örneklemini 10.636 hemşirelik öğrencisi oluşturmuştur. İncelenen araştırmalarda yaşlı ayrımcılığının değerlendirilmesinde en sık Yaşlı Ayrımcılığı Tutum Ölçeğinin (YATÖ), Kogan’ın Yaşlı İnsanlara Karşı Tutum Ölçeğinin (Kogan OP Ölçeği) ve UCLA Geriatrik Tutum Ölçeğinin (UCLA-GA) kullanıldığı belirlenmiştir. Bu sistematik derlemenin sonuçlarına göre, hemşirelik öğrencilerinin yaşlılara yönelik tutumları çoğunlukla olumludur ve bu tutum çeşitli faktörler ile ilişkilidir. Bu nedenle hemşirelik öğrencilerinin olumlu tutumlarını artırmak için, hemşirelik lisans müfredatında yaşlı sağlığı ile ilgili derslerin yer alması, yaşlılarla olumlu etkileşimi artırmaya yönelik projelerin yürütülmesi ve yaşlılara yönelik olumlu tutumu artırmada çeşitli müdahalelerin etkinliğini göstermeyi amaçlayan deneysel çalışmaların yapılması önerilebilir.

**Anahtar Kelimeler:** Yaşlı, yaşlıya karşı tutum, yaşlı ayrımcılığı, hemşirelik öğrencisi

The population tends to age in almost all countries, including Türkiye (UN, 2022). While the older population aged 65 and over in Türkiye was 8.2% in 2015, it increased to 9.5% in 2020. According to population projections, the aging population is estimated to be 12.9% in 2030, in a 2040 report (TUIK, 2021). These demographic changes have led to the recognition of “old” subcategories in the elderly classification. Accordingly, those aged 65-74 are defined as “youngest-old”, those aged 75-84 as “middle-old”, and those aged 85 and over are defined as “oldest-old” (Kydd & Fleming, 2015). Considering the increase in the aging population, it is very important to ensure adequate well-being and protect the health of the elderly (Marques et al., 2020). However, ageism against older adults is seen as an important obstacle to the healthy aging of the elderly and is accepted as an important public health problem (Officer et al., 2020). The concept of ageism, first defined by Butler in the late 1960s, refers to discrimination against people simply because they are ‘old’ (Kydd & Fleming, 2015). Ageism, is defined as a multifaceted concept that includes three different dimensions: Cognitive (stereotypes), emotional (bias), and behavioral (discrimination) dimensions (Marques et al., 2020). Here, the term age discrimination is handled differently from the general ageism concept, as it represents only behavioral elements (Stypińska & Nikander, 2018).

Ageism is a widespread problem and expected to expand in the context of a growing aging population around the world (Burnes et al., 2019). Globally, one in two people exhibits age-discriminatory attitudes toward older adults (Marques et al., 2020). However, ageism is widely recognized as a major threat to the well-being of older adults (Kang & Kim, 2022). It has been emphasized in the literature that an estimated 6.3 million cases of depression worldwide may be due to ageism (Jackson et al., 2019).

Nursing is one of the main professions to care for older people and nursing students will be potential members of this profession in the future. As the population is aging rapidly, students are expected to encounter older individuals more frequently in their field of practice or later in their professional life. To provide quality care to the aging population, it is essential to synthesize the research on students’ attitudes toward the elderly. Although there are reviews in the literature investigating the ageism attitudes of healthcare professionals or university students (Helvacı, 2018; Kaya & Örsal, 2018), no study was found focusing on the ageism attitudes of nursing students in Türkiye. Therefore, the main aim of the current research is to examine the studies conducted in Türkiye to determine the attitudes of nursing students toward the elderly and related factors.

With this systematic review, it is aimed to contribute to the literature by examining the ageism attitudes of nursing students, which will be an important part of the provision of health services in the future, in line with the related research.

### **Ageism**

The effects of the demographic change experienced with the increase in the elderly population are seen in different ways in societies. The sociocultural structure of the society, and changes in attitudes and behaviors can affect the perception of individuals and society toward the elderly and old age (Akdemir et al., 2007). Individuals' attitudes toward older people can be positive or negative. While it is accepted as positive attitudes toward the elderly that individuals see the elderly as knowledgeable and loving individuals; seeing the elderly as sick, dependent and ugly is among the negative attitudes. Ageism includes all of these positive and negative attitudes (Bulut & Çilingir, 2016). Although the term ageism was first defined by Robert Butler (1969, p. 243) as "to prejudice by one age group toward other age groups", this definition has evolved over the years. The World Health Organization (WHO, 2021), on the other hand, defines ageism as referring to the stereotypes (how we think), prejudice (how we feel) and discrimination (how we act) toward others or oneself based on age. By definition, it is accepted that age discrimination can be directed at any age group, but age discrimination against the elderly draws more attention in the literature (Ayalon & Tesch Römer, 2018).

Age discrimination has been defined as a worldwide crisis (Levy et al., 2022). However, despite its size and adverse effects on the health and functioning of older people, it is not yet seen as a public health priority. In a study conducted with 83,034 people in 57 countries, it was stated that one out of every two people has a moderate or high degree of age discrimination (Officer et al., 2020). Ageism, being such a widespread problem, poses a significant threat to the well-being of older people (Marques et al., 2020). A systematic review of 422 studies from 45 countries revealed ageism is associated with many negative outcomes, including unhealthy diet, risky health behaviors such as drug non-adherence, excessive alcohol use, smoking, and cognitive impairment (Mikton et al., 2021).

### **Ageism and Nursing**

While attitudes toward ageism can be encountered in all areas of life, one of the areas with the highest number of studies is considered to be health services. Elderly indi-

viduals apply to health institutions to receive health services due to the increase in health problems, and nurses are the group with which individuals interact the most during the health care services process (Bulut & Çilingir, 2016). Nurses form a large part of the group of health professionals who play an important role in meeting the care needs and promoting the psychological and physical well-being of senior adults (Grady, 2011). However, there are studies in the literature that suggest that nurses do not want to take part in the care of the elderly and that they have some negative prejudices toward the elderly (Ben Harush et al., 2016; Heydari et al., 2019). In a systematic review examining nurses' attitudes toward the care of the elderly, nurses had positive and negative attitudes toward elderly care; negative attitudes were related to the characteristics and care demands of the elderly, which is reflected in the care approaches of nurses. Also, it has been reported that there is a lack of research on the subject in the same study (Rush et al., 2017). Negative attitudes of nurses and other health professionals toward elderly individuals are reflected in the quality of care provided, thus leading to negative health outcomes (Chang et al., 2020). For this reason, it is important to gain a positive attitude toward the elderly to nursing students, who are the nurses of the future. Nursing education generally has positive effects on nurses' attitudes toward elderly care (Rush et al., 2017). However, studies in the literature have reported that students, who are the nurses of the future, have negative attitudes toward the elderly (Ayalon et al., 2019; Chang et al., 2020), and do not prefer to work with older patients (Kalánková et al., 2021; WHO, 2021).

It is thought that it is important for the quality of care to be carried out by conducting studies on the negative attitudes of nursing students who play a role in the provision of health services to the elderly, toward ageism, and for the services provided to the elderly to be effective. In addition, it is thought that it is important to address the issue of ageism at the beginning of their nursing careers and to help combat the unequal care of seniors. In line with the results of this study, the ageism attitudes of nursing students will be determined, and it will be a guide for interventions to improve the attitudes of students in a positive way. When effective interventions are implemented, they can display a more positive approach toward the elderly when they take an active role in health services in the future. In this context, this study aims to examine studies conducted in Türkiye to determine nursing students' attitudes toward the elderly. Two primary questions are addressed in this research: "What are the attitudes of nursing students toward the elderly in Türkiye?" and "What are the factors affecting attitudes toward the elderly?"

## Method

### Study Design and Review Strategy

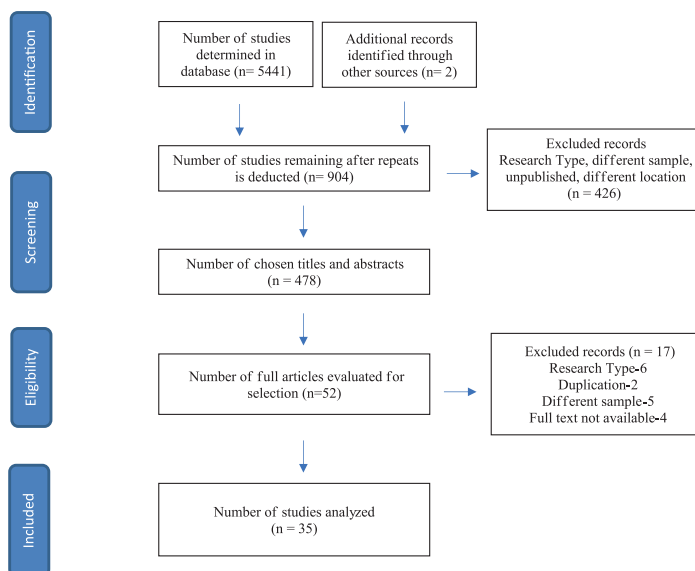
This systematic review was carried out according to the “Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA)” (Moher et al., 2009). The review was conducted between September and November 2021 using search databases of Google Academics, PubMed, ProQuest, and Turkey Citation Index. In the search, the keywords “nursing students”, “attitude towards elderly”, “elderly discrimination”, “ageism,” and “Turkey” were used in different combinations.

### Identification and Selection of Studies

Quantitative studies conducted in Türkiye and published as articles investigating nursing students' attitudes toward the elderly and/or affecting factors were included in the systematic review. Details of the article selection process are given in Figure 1.

**Figure 1**

*PRISMA Chart of Search Strategy and Identification of Articles Included*



### Inclusion and Exclusion Criteria

Inclusion and exclusion criteria were determined according to the PICOS method. PICOS consists of Population (P), Intervention (I), Comparison group (C), Outcomes (O), and Study design (S) (Methley et al., 2014). Intervention (I) and Comparison group

(C) criteria did not apply and were not used in this study. According to the inclusion criteria, Population consist of students enrolled in the nursing department of any university in Türkiye. Outcomes consist of attitudes toward the elderly and/or influencing factors. Also, the study design consists of original quantitative studies (descriptive, cross-sectional, cohort, and case-control) published in Turkish or English in national and international journals. As the exclusion criteria of this study, studies not published in full text and not suitable for the type of research were excluded.

### **Evaluation of the Methodological Quality of Studies**

The methodological quality of the articles included in this systematic review was evaluated by both of the authors. STROBE (STrengthening the Reporting of OBservational studies in Epidemiology) was used to evaluate the quality of the studies (Karaçam et al., 2014). Each item listed in the STROBE statement was scored by giving “0” or “1”. A score of “1” was given if the item mentioned above was met, and “0” was given if it was not. Most studies had a score of 18 (27/35) and above.

### **Data Analysis**

A data extraction tool developed by the researchers was used to access the research data. Information about the type of research, sample size, the measurement tool which determines the attitude toward ageism, attitudes toward ageism, and related factors were included in the data extraction tool to define the studies included in the research.

## **Results**

### **Descriptive Features**

After excluding duplicates and studies that did not meet the inclusion criteria from 5,443 studies, the remaining 35 studies were included in the systematic review. The sample of the studies consisted of a total of 10,636 nursing students. In the studies examined, together with the students of the nursing department, medical students in two studies (Ayoğlu et al., 2014; Koc et al., 2020), physical education students in one study (Bayraktar et al., 2015), physiotherapy students in one study (Can et al., 2020), aged care students in two studies (Tosunöz & Güngör, 2021; Yılmaz & İnce, 2017) and students studying in different departments in health sciences in two studies (Köse et al., 2015; Yazıcı et al., 2016) were included in the sample. In these studies, the results of nursing students about ageism were discussed (Table 1).

## Ageism Attitudes of Nursing Students

In the studies reviewed, the Ageism Attitude Scale (AAS) (62.9%;  $N = 22$ ), Kogan's Attitude toward Old People Scale (the Kogan OP Scale) (34.2%;  $N = 12$ ), and the UCLA Geriatrics Attitudes Scale (UCLA-GA) (2.9%;  $N = 1$ ) were used to assess ageism (See Table 1). High scores in all three scales mean a positive attitude toward the elderly. The minimum and maximum scores obtained from the AAS were 23 and 115, respectively (Vefikuluçay Yılmaz & Terzioglu, 2011). AAS scores were between  $50.00 \pm 5.9$  and  $100.92 \pm 5.6$ . The Kogan OP Scale score ranged between 34 and 204 points (Kılıç & Adıbelli, 2011). Mean Kogan OP Scale scores were between  $80.21 \pm 11.61$  and  $154.73 \pm 22.08$ . The scores obtained from the UCLA-GA scale were between 14 and 70 (Sahin et al., 2012). In one study, the scale score was  $44.76 \pm 5.83$ . When the attitudes toward the elderly were evaluated as positive or negative according to the score obtained from the scale, 74.9% ( $N = 26$ ) of the studies were positive, 11.4% ( $N = 4$ ) were partially positive, 11.4% ( $N = 4$ ) were moderate, and 2.9% ( $N = 1$ ) were negative (See Table 1).

## Factors Related to Ageism Attitudes

The associated factors identified in the studies are summarized in Table 1. In terms of socio-demographic variables, while the gender of students was associated with age discrimination in 11 studies (Ayoğlu et al., 2014; Can et al., 2020; Kaplan et al., 2021; Koc et al., 2020; Köse et al., 2015; Özer & Terkeş, 2014; Salman et al., 2018; Şahin & Erdem, 2017; Toygar & Kardakovan, 2020; Usta et al., 2012; Yardımcı Gürel, 2019), it

**Table 1**  
*Summaries of Included Articles*

Author (Year)	Sample	Measurement Tool	Scale Score	Conclusion
Adıbelli et al., 2013	309	Kogan OP Scale	$99.49 \pm 11.12$	Students' attitudes toward the elderly were positive, and 4.2% of the students wanted to work with the elderly after graduation.
Alkaya & Okuyan, 2017	432	Kogan OP Scale	$121.1 \pm 10.7$	Students' attitudes toward the elderly were positive and the scale scores of the students who lived with the elderly at home, cared for elderly family members, and wanted to care for the elderly in the future were higher.
Altay & Aydın, 2015	298	Ageism Attitude Scale	$68.82 \pm 8.54$	Students' attitudes toward the elderly were positive, and the mother's educational status, the working status of the father, and the desire to work with the elderly after graduation were related to the total score.



<b>Ayođlu et al., 2014</b>	339	Kogan OP Scale	125.70±15.13	Students had positive attitudes toward the elderly; medical students had more positive attitudes toward the elderly than nursing students. Furthermore, female students, those with a positive income/ expenses balance, and those who did not want to work with the elderly after graduation had less positive attitudes.
<b>Bahadir Yilmaz, 2018</b>	275	Ageism Attitude Scale	82.7±8.8	Students' attitudes toward the elderly were positive. Being a 4 <sup>th</sup> -grade student, living in the district, and volunteering to work with the elderly after graduation positively affected the scores of the students. In addition, there was a relationship between the professional values of nursing students and their attitudes toward ageism.
<b>Bayraktar et al., 2015</b>	721	Kogan OP Scale	150.03 ±21.88	Students had a positive attitude, and the students who wanted to live in the same house with an elderly person had a more positive attitude toward the elderly.
<b>Baysal et al., 2019</b>	220	Kogan OP Scale	136.18±9.17	Students' elderly attitudes and empathic approach skills were partially positive, and the results differed significantly depending on whether they wanted to work in the elderly care unit and took geriatrics courses.
<b>Bozdođan Yeşilot et al., 2020</b>	851	Ageism Attitude Scale	80.78±8.67	Students had a positive attitude and a significant relationship existed between attitudes and the class, place of birth, family type, and scale scores.
<b>Bulut et al., 2017</b>	344	Ageism Attitude Scale	87.2±4.6	Attitudes toward ageism were positive, and those who lived with an elderly person in their family had high sub-dimension mean scores.
<b>Can et al., 2020</b>	331	Ageism Attitude Scale	84.45±9.74	It was observed that students had positive attitudes toward ageism, and physiotherapy students had more positive attitudes toward the elderly. Women's attitudes, those who had an extended family, and those who wanted to live with their families in the future were more positive. There was no significant difference regarding marital status, study-grade, income level, the place where they lived the longest, or scale mean scores (p>0.05).
<b>Darling et al., 2018</b>	468	Kogan OP Scale	118.83±11.34	Students' attitudes toward ageism were less favorable. Positive attitudes decreased as the age of the student increased, and students who wanted to work with the elderly had better scores.
<b>Demir et al., 2016</b>	293	Ageism Attitude Scale	79.49±9.04	Students had attitudes toward ageism and that their class, family structure, and willingness to work with the elderly were associated with age discrimination.
<b>Kaplan, Serin, &amp; Tülüce, 2021</b>	229	Ageism Attitude Scale	68.59±5.67	Students had a moderate attitude toward ageism, and a high empathic approach was associated with age discrimination.
<b>Kaplan et al., 2021</b>	102	Ageism Attitude Scale	86.76±11.59	Students' attitudes toward ageism were positive, and the average scores of the fourth-grade students and female students were higher than the averages of male students.

<b>Karadağ et al., 2012</b>	85	Ageism Attitude Scale	83.67±9.25	The subscale-items of the scale showed positive attitudes toward ageism, caring for the elderly, and wanting to live with their parents in the future. There was no statistically significant difference between the class and where they stayed the longest.
<b>Kızılcı et al., 2013</b>	417	Kogan OP Scale	154.73±22.08	Nursing students' attitudes toward ageism were positive; the classroom and living with an elderly relative affected students' attitudes positively.
<b>Koc et al., 2020</b>	328	Ageism Attitude Scale	86.51±8.22	Students had positive attitudes toward the elderly and gender was significant in the sub-dimensions of the scale.
<b>Köse et al., 2015</b>	85	Ageism Attitude Scale	50.00 ± 5.9	Students' attitudes toward the elderly were negative. Female students' attitudes toward the elderly were more negative than the male students. In addition, students did not want to work in the geriatric clinic, and those who did not want to work with geriatric patients had more negative attitudes toward the elderly.
<b>Meriç et al., 2019</b>	318	Ageism Attitude Scale	71.5±10.2	Students' attitudes toward ageism were slightly above the average and their attitudes toward ageism were significantly related to their views on home care services.
<b>Okuyan et al., 2018</b>	213	Kogan OP Scale	119.7±9.9	Finnish and Turkish nursing students had a moderate attitude toward the elderly, and Finnish students had a significantly higher average score of negative attitudes.
<b>Olak &amp; Tümer, 2018</b>	233	Ageism Attitude Scale	69.51±7.13	Students had a moderate attitude toward age discrimination, and the difference between the first and fourth-grade total scale scores was statistically significant ( $p<0.05$ ). In addition, the difference in the mean score of the scale according to gender, income status, education level of parents, and living with an elderly was not statistically significant ( $p>0.05$ ).
<b>Ozkaptan et al., 2012</b>	192	Kogan OP Scale	121.56±13.60	Nursing students' attitudes toward the elderly were somewhat positive, and students who did not have an elderly at home had a more positive attitude ( $p<0.05$ ). In addition, there was no significant difference between the scores of the students from the scale according to age, class, and place of residence ( $p>0.05$ ).
<b>Özer &amp; Terkeş, 2014</b>	285	Ageism Attitude Scale	68.27±6.88	Nursing students' attitudes toward ageism were positive, and age discrimination attitude scale scores differed significantly between study grade, gender, and living with family members aged 65 and over.
<b>Sağır &amp; Özkaptan, 2016</b>	180	Kogan OP Scale	124.32±42.99	Nursing students had positive attitudes toward elderly individuals and their empathic tendencies were above the moderate level. In addition, a significant difference was found between the empathic tendencies of the students who had positive attitudes toward the elderly and the students who had negative attitudes toward the elderly ( $p<0.05$ ).

<b>Salman et al., 2018</b>	472	Kogan OP Scale	80.21 ± 11.61	Nursing students had positive attitudes toward the elderly, and 4 <sup>th</sup> -grade students, married students, and those who had experience of living with the elderly had more positive attitudes toward the elderly. In addition, male students' attitudes toward the elderly were more positive than the attitudes of female students.
<b>Şahin &amp; Erdem, 2017</b>	321	UCLA-GA Scale	44.76±5.83	Students' attitudes toward the elderly were generally at a moderate level, and there was a significant relationship between gender and class and the total score of the scale. There was no significant relationship between the place where one lived for the longest time, the living status of an elderly individual at home, and the total scale score.
<b>Tosunöz &amp; Güngör, 2021</b>	346	Ageism Attitude Scale	83.65±0.40	Students had a positive attitude toward ageism and the negative beliefs and perceptions of the nursing students toward the elderly were lower than the elderly care students.
<b>Toygar &amp; Karadakovan, 2020</b>	509	Ageism Attitude Scale	83.97±7.72	Students had positive attitudes toward ageism, and gender, years at school, caring for the elderly, and living with an elderly relative were associated with ageism attitudes.
<b>Usta et al., 2012</b>	145	Ageism Attitude Scale	84.01 ± 7.61	Students had a positive attitude toward ageism, and age discrimination attitudes were associated with class, gender, having taken courses on elderly health, wanting to live with elderly parents in the future, and living with an elderly person.
<b>Ünsar et al., 2015</b>	319	Ageism Attitude Scale	84.8±9.32	Students had a positive attitude toward ageism, and their class, living with the elderly, and caring for elderly people significantly affected their attitudes toward ageism ( $p < 0.05$ ). The gender of the students did not affect their attitudes toward ageism ( $p > 0.05$ )
<b>Yardımcı Gürel, 2019</b>	312	Ageism Attitude Scale	85.18±7.99	Students' attitudes toward ageism were positive, and there was a relationship between gender, maternal employment status, and their willingness to work with the elderly after graduation.
<b>Yazıcı et al., 2016</b>	310	Kogan OP Scale	126.8±15.48	Students studying in health-related departments had a positive attitude toward ageism.
<b>Yılmaz &amp; Özkan, 2010</b>	167	Ageism Attitude Scale	100.92±5.62	Nursing students had a positive attitude toward ageism, and a statistically significant difference was found between the scale total score average and the class they attended.
<b>Yılmaz and İnce, 2017</b>	71	Ageism Attitude Scale	86.72±7.616	Nursing students had a positive attitude toward ageism, and the average score of nursing department students was higher than that of elderly care students, and as the grade level increased, their positive attitudes toward the elderly increased.
<b>Zaybak et al., 2017</b>	116	Ageism Attitude Scale	85.75±10.35	Students' attitudes toward ageism were positive, and there was no statistically significant difference between the mean scores obtained according to age, gender, living with an elderly person, and wanting to work with older people after graduation.

was not related in three studies (Olak & Tümer, 2018; Ünsar et al., 2015; Zaybak et al., 2017). Marital status was associated with ageism in one study (Salman et al., 2018), and not related to in another study (Can et al., 2020). While the income level of nursing students was related to ageism in one study (Ayoğlu et al., 2014), it was not related in two studies (Can et al., 2020; Olak & Tümer, 2018). Additionally, the working status of the mothers/fathers of nursing students were related to ageism in two studies (Altay & Aydın, 2015; Yardımcı Gürel, 2019) and the educational status of the mother in one study (Altay & Aydın, 2015), the education level of the parents was not associated with ageism in the study conducted by Olak and Tümer (2018). The family type of the students was associated with the attitude of ageism in three studies (Bozdoğan Yeşilot et al., 2020; Can et al., 2020; Demir et al., 2016) and living with an elderly person at home was associated with the positive attitude toward the elderly in eight studies (Alkaya & Okuyan, 2017; Bulut et al., 2017; Kizilci et al., 2013; Özer & Terkeş, 2014; Salman et al., 2018; Toygar & Kardakovan, 2020; Usta et al., 2012; Ünsar et al., 2015). In a study conducted by Ozkaptan and colleagues (2012), students who did not have an elderly person in their family had more positive attitudes toward the elderly than students who had an elderly person in their family. However, in two studies, no significant relationship was found between living with an elderly person and ageism (Olak & Tümer, 2018; Zaybak et al., 2017). Additionally, it has been reported that students who want to live with their elderly family members in the future have more positive attitudes toward the elderly (Bahadır Yılmaz, 2018; Can et al., 2020; Karadağ et al., 2012; Usta et al., 2012). Furthermore, while the place lived in for the majority of life was associated with ageism in two studies (Bahadır Yılmaz, 2018; Bozdoğan Yeşilot, 2020) no correlation was found in three studies (Can et al., 2020; Olak & Tümer, 2018; Ozkaptan et al., 2012).

Class level, one of the most frequently examined variables, was related with positive ageism in 12 studies (Bahadır Yılmaz, 2018; Bozdoğan Yeşilot et al., 2020; Demir et al., 2016; Kaplan et al., 2021; Kizilci et al., 2013; Olak & Tümer, 2018; Özer & Terkeş, 2018; Toygar & Kardakovan, 2020; Usta et al., 2012; Ünsar et al., 2015; Yılmaz & İnce, 2017; Yılmaz & Özkan, 2010), but not in two studies (Can et al., 2020; Karadağ et al., 2012). Also, caring for the elderly was associated with a positive attitude toward older adults in four studies (Altay & Aydın, 2015; Karadağ et al., 2012; Toygar & Kardakovan, 2020; Ünsar et al., 2015) taking courses on geriatric health in two studies (Bayraktar et al., 2015; Bozdoğan Yeşilot et al., 2020) and wanting to work with older adults

after graduation in eight studies (Alkaya & Okuyan, 2017; Altay & Aydın, 2015; Bahadır Yılmaz, 2018; Baysal et al., 2019; Darling et al., 2018; Demir et al., 2016; Köse et al., 2015; Yardımcı Gürel et al., 2019). In a study by Zaybak and colleagues (2017), no significant difference was found regarding the desire to work with the elderly and the attitude of ageism. Additionally, studies have shown that nursing students' views on home care services (Meriç et al., 2019), their professional values (Bahadır Yılmaz, 2018), and empathetic approaches (Kaplan Serin & Tülüce, 2021; Sağır & Özkaptan, 2016) are associated with ageism (See Table 1).

### Discussion

In this systematic review, 35 studies conducted in Türkiye to determine nursing students' attitudes toward the elderly were analyzed. In all studies examined, scales with validity and reliability were used to evaluate attitudes toward the elderly. In another systematic review, it was stated that most of the scales used to evaluate the attitude toward the elderly did not have sufficient scope and psychometric validity (Ayalon et al., 2019). The use of validated and reliable scales in the studies included in this systematic review is thought to be one of the strengths of the study.

In this study, it was observed that the attitudes of nursing students toward the elderly were positive in most of the studies. Similar to this study, in another systematic review the majority of studies reported positive attitudes (Liu et al., 2013). In a systematic review conducted by Hanson (2014), some nurses culturally showed positive or negative age discrimination. It is desirable for nursing students to have a positive attitude. Therefore, effective interventions should be carried out in order to increase the positive attitudes of students toward the elderly and to change the negative ones. As a matter of fact, in a systematic review, initiatives to increase education and intergenerational contact were among the most effective interventions in increasing positive attitudes (Burnes et al., 2019). It is thought that the inclusion of geriatric and gerontology nursing courses in the nursing curriculum is an important approach. As to the study by Abudu Birresborn and colleagues (2019), an undergraduate curriculum rich in geriatrics and gerontology improved students' knowledge of the elderly and alleviated age discrimination attitudes. In another systematic review analyzing educational interventions, the combination of information with an experiential activity (e.g., service learning) was noted as the most common pedagogical approach that changes student attitudes (Chonody, 2015).

Studies included in the systematic review in this study showed some variables associated with nursing students' attitudes toward the elderly. In most of the studies included in the systematic review, variables such as gender, marital status, income status, social class, family type, education and working status of their parents, living or wanting to live with an elderly person, caring for the elderly, taking courses on elderly health, and wanting to work with the elderly after graduation were among the factors associated with ageism. However, a variable found significant in some studies could be nonsignificant in another study. For example, when gender is considered, one study suggested that female students' attitudes toward older individuals were more positive (Can et al., 2020), while in another study, male students' attitudes were stated to be more positive (Ayoğlu et al., 2014). These inconsistencies show that more studies on the subject are needed. Again, in this study, variables such as living with the elderly, caring for the elderly, taking courses in elderly health, and wanting to work with the elderly after graduation were found to be positively related to a decrease in ageism. In line with this, in a systematic review conducted by Liu and colleagues (2013), age, gender, educational level of nurses, and their preference to work with elderlies were associated with positive attitudes toward the elderly.

The strengths of this study are the inclusion of many studies in the systematic review, the large sample size, and the validity and reliability of the instruments used to measure attitudes toward the elderly. However, the study also has some limitations. First, most of the studies were carried out with small sample sizes using nonprobability sampling methods. Second, since the studies included in the systematic review are descriptive research designs, these studies are insufficient to explain causality.

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