

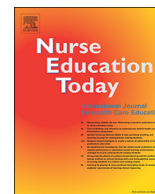
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## Finnish nurse students' attitudes towards older adults and the teaching of gerontological nursing – A survey study

Sirpa Salin<sup>a,\*</sup>, Katja Hautsalo<sup>b</sup>, Kimmo Vänni<sup>b</sup>, Susanna Seitsamo<sup>b</sup>, Lea Yli-Koivisto<sup>c</sup>

<sup>a</sup> Tampere University of Applied Sciences, School of Health Care, Kuntokatu 3, FI-33520 Tampere, Finland

<sup>b</sup> Tampere University of Applied Sciences, School of Health Care, Finland

<sup>c</sup> Tampere University of Applied Sciences, School of Health Care and Social Services, Finland

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### ABSTRACT

**Background:** Finland has one of the oldest populations in Europe. Gerontological nursing is unfortunately not appealing to nurse students.

**Objectives:** This study aimed to examine nurse students' attitudes towards older adults and their suggestions about gerontological nursing course.

**Design:** A cross-sectional, descriptive study.

**Settings:** One university of applied sciences in Finland.

**Participants:** A total sample of nurse students ( $n = 523$ ).

**Methods:** Data were collected in 2015 using KAOP scale that included background questions and one open question. The data were analyzed statistically and thematized. The themes were then quantified as frequencies.

**Results:** The response rate was 47.5%. The mean age was 26.9 years. The results showed that students' attitudes were positive towards older adults. Factor analysis produced a four factor (characteristic value  $> 1.0$ ) model (explanation rate 44%,  $\chi^2 118,770$ ,  $df = 74$  and  $p = .001$ ). A four-factor model was however not justifiable, as only one variable loaded onto the fourth factor. The range of the communalities of the variables chosen for the factor analysis was between 0.37 and 0.99. There were seven such variables and their reliability was high ( $\alpha = 0.71$ ). The positive attitude was described by reciprocal understanding, social skills of older adults and older adults' ability to maintain their home and themselves. Of the suggestions for improving the teaching of gerontological nursing, 60% were related to the contents of teaching, 37% to didactic solutions and 3% to the capabilities of the teacher.

**Conclusions:** Students consider older adults as individuals with their own personalities and many resources, a view that should not be lost after graduation. The study showed a demand for moving teaching away from classrooms to the real environments of older people's care. Using various methods such as lectures by experts by experience can make the topic more appealing.

### 1. Introduction

Finland has one of the oldest populations in Europe. The population is rapidly aging as the Finnish people are living longer. The share of over-65-year-olds of the population will increase from the current 20% to 26% by 2030 and to 29% by 2060 (THL, 2019).

Ensuring a sufficiently large and capable care staff is a major challenge. Gerontological nursing does unfortunately not appeal to students, partially because the general appreciation of older people's care is low (Rytkönen, 2018; Koskinen et al., 2012; Liu et al., 2013). Recently graduated nurses feel that they cannot use their own expertise

in caring for older adults.

The American Association of Colleges of Nursing (AACN) has created competency statements on gerontological nursing (AACN, 2010). They emphasize a wide knowledge of geriatrics and gerontology and applying it to treating older people.

Finnish registered nurses are trained at the country's 23 universities of applied sciences (Ministry of Education and Culture, 2019). The education lasts for 3.5 years of full-time study and grants a bachelor's degree and a registered nurse license. Aside from theoretical studies, half of the education consists of practical study in accordance with EU Directives (2013/55/EU). Courses on gerontological nursing are part of

\* Corresponding author.

E-mail addresses: [sirpa.salini@tuni.fi](mailto:sirpa.salini@tuni.fi) (S. Salin), [katja.hautsalo@tuni.fi](mailto:katja.hautsalo@tuni.fi) (K. Hautsalo), [kimmo.vanni@tuni.fi](mailto:kimmo.vanni@tuni.fi) (K. Vänni), [susanna.seitsamo@tuni.fi](mailto:susanna.seitsamo@tuni.fi) (S. Seitsamo), [lea.yli-koivisto@tuni.fi](mailto:lea.yli-koivisto@tuni.fi) (L. Yli-Koivisto).

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the degree requirements (210 ECTS) at all universities of applied sciences, but the breadth of the courses varies between two and ten credits. Some universities teach gerontological nursing as part of other courses.

The university at which this study was conducted offers a compulsory four-credit course on gerontological nursing during the second year of studies. The university is located in one of Finland's largest cities and is one of the largest universities of applied sciences in the country with over 10,000 students and > 40 degree programs.

There have not been many studies on the teaching of gerontological nursing in Finland (Hirvonen et al., 2004; Koskinen et al., 2012). The aging population and the increased need for skilled nurses challenges teachers to develop the teaching of gerontological nursing to be more appealing and of higher quality.

## 2. Background

International studies show that nurse students have positive attitudes towards older adults. Despite this, gerontological nursing is one of the least popular fields among students in both Finland and the rest of the world (Hirvonen et al., 2004; Kloster et al., 2007; Henderson et al., 2008; Rodgers and Gilmour, 2011; Stevens, 2011; Yildirim et al., 2011). When making their career choices, students either do not want to work with older adults or are hesitant (Koskinen et al., 2012) or think they might do it later (Roshier and Robinson, 2005). Some students do want to pursue gerontological nursing after graduation (Celik et al., 2010).

Nurse students consider nursing older adults challenging (Koskinen et al., 2012) and interesting and rewarding (Brown et al., 2008). Some see it as depressing and tedious basic nursing work (Hirvonen et al., 2004; McLafferty et al., 2010; Brown et al., 2008; Henderson et al., 2008) that is hurt by limited resources (Hirvonen et al., 2004; Evers et al., 2011). Students felt that they could not use their skills fully (Hirvonen et al., 2004.) and that the work lacked challenges (Brown et al., 2008; Henderson et al., 2008). However, interacting with older adults and their families was seen as difficult (Henderson et al., 2008; Celik et al., 2010). Encountering suffering and death was hard for students, which they would rather avoid (Henderson et al., 2008).

First-year students' attitudes were the most negative according to some researchers (Engström and Fagerberg, 2011; Bashah and Nordin, 2016), but attitudes became more positive during the course of their studies (Hweidi and Al-Obeisot, 2006; Söderhamn et al., 2011; Feenstra, 2012; Bashah and Nordin, 2016). Attitudes improved particularly when theory was integrated to a positive practical training location (Rodgers and Gilmour, 2011; Liu et al., 2013) and teachers used new methods such as gamification (McLafferty et al., 2010). Students with an earlier degree (Ryan et al., 2007) and who were older (Engström and Fagerberg, 2011; Bashah and Nordin, 2016; Alquwez et al., 2018), had more positive attitudes than younger students. Experience in working with older adults and helping older adults they knew increased students' interest in gerontological nursing (Henderson et al., 2008; Alquwez et al., 2018).

Stevens (2011) and Hirvonen et al. (2004) found opposite results, according to which those at the beginning of their studies were interested in working with older adults but lost their interest over the course of their studies. One reason cited were experiences during practical training, which decreased their interest (Hirvonen et al., 2004; Brown et al., 2008; Skaalvik et al., 2010; Stevens, 2011).

Kogan's (1961) Attitudes towards Old People (KAOP) is the most widely used scale measuring attitudes towards older adults in the international study of nursing (Matarese et al., 2013). The purpose of this study was to use the KAOP scale to measure the attitudes of nurse students and to chart their suggestions for improving the teaching of gerontological nursing.

## 2.1. Study questions

This study will answer the following questions:

1. What kind of attitudes do nurse students' have towards older adults?
2. How do nurse students think gerontological nursing should be taught as part of nurse education?

## 3. Methods

### 3.1. Design, sample and setting

The study uses a descriptive, cross-sectional survey design. The data were collected from nurse students ( $N = 1100$ ) at a university of applied sciences through total sampling in 2015. The students were sent an e-mail about the study and a link to the questionnaire. All nurse students enrolled at the university at the time received the message.

They had 2 weeks to answer the questionnaire, after which they were sent a second request. The response rate was 47.5% ( $n = 523$ ).

### 3.2. Measurement tool

The study used Kogan's Attitudes toward Old People scale (1961), which includes 34 statements with response options on a five-point Likert scale, where 5 is strongly agree, 4 is agree, 3 is neutral, 2 is disagree and 1 is strongly disagree. Seventeen of the statements show an appreciation, or positive, attitude and seventeen a prejudiced, or negative, attitude towards older people. This study includes only the 17 positive statements and excludes the negative statements because of their poor reliability (Vitman-Schorr et al., 2014). Hirvonen et al. (2004) have previously translated the KAOP into Finnish, which was the version of the scale used in this study.

Kogan developed the scale almost 60 years ago, which raises the question of whether its statements correspond to current attitudes towards older adults. The statements cover a wide range of topics and include significant factors that influence attitudes towards older people's care, but some no longer correspond to today's attitudes or scientific knowledge related to older people. For instance, the statements related to older adults' independence and cognitive functions are one-sided and limited. The statements related to older adults' tidiness can even be seen as offensive. Despite its limitations, the scale is still used in international studies, particularly in measuring nurse students' attitudes towards older adults. The scale's validity and reliability have been studied in the United States, China, Turkey, Sweden, Greece and Italy, and it has been found to still be valid (Matarese et al., 2013).

The study also used an open question where the respondents were asked to suggest how gerontological teaching should be taught as part of nursing education.

### 3.3. Variables

The dependent sum variable, the attitude towards older people, was based on the exploratory factor analysis of the KAOP scale (1961) and the variables that loaded onto the factors best. The independent variables were as follows: the students' age (both continuous and classified into 19–24, 25–29, 30–56), year of study (first, second and third year), earlier education in social and/or health care (yes, no) and work experience in the field (no, < 1, 1–5, > 5).

### 3.4. Analysis

The data were analyzed using the SPSS for Windows 23.0 statistics program. First, the distributions of the data were studied. Second, exploratory factor analysis was used as the multivariate method for creating a sum variable, and Cronbach's alpha was used to study its validity. The associations between the dependent and independent

variables were studied using nonparametric tests and a *t*-test. The Chi-square goodness of fit test ( $\chi^2$ ) was used to study the statistical difference between the expected and observed values. The limit of statistical significance was defined as  $p < .05$ .

The open question was analyzed by thematising the respondents' suggestions ( $N = 483$ ) and counting the frequencies (Hsieh and Shannon, 2005). The data were first coded according to the type of suggestion, after which they were sorted and named into groups describing their contents (Table 3).

### 3.5. Ethics of the study

The permission for the study was given by the university at which the study was conducted (Dnro: 35/163/2015). The permission to use the Finnish translation of the KAOP scale (1961) was given by Raija Hirvonen, who controls its rights. The questionnaire was sent online to the subscribers of the university's nurse student mailing list. The students were informed about the study by a covering letter that explained its voluntariness and confidentiality of data collection and reporting. The second request to participate in the study was sent through the same mailing list, so no students were identified or approached in person. The students gave their informed consent by answering the questionnaire. The researchers followed good scientific practice and guidelines in conducting the study (TENK, 2012).

## 4. Results

### 4.1. Demographics of the nurse students

The study sample ( $n = 523$ ) consisted of 476 women (91%) and 47 men (9%). Their ages ranged from 19 to 56 (Mn 26.9, SD 7.8) and approximately half were under 25. Of the respondents, 35% ( $n = 184$ ) were first-year students, 42% ( $n = 221$ ) second-year students and 23% ( $n = 118$ ) third-year students. Approximately half had an earlier social and/or health care degree. Those with no work experience made up almost a fifth of the respondents, as did those with more than 5 years of experience. Those with less than a year of experience (32%) and those with one to 5 years of experience (33%) made up almost equal-sized groups (Table 1).

### 4.2. Nurse students' attitudes towards older adults

The total scores for each statement are presented in Fig. 1. Nearly all respondents thought that older adults' stories of old times were

interesting (4.60). Most also agreed that older adults are individuals capable of independent action (4.39). Out of the statements related to habitation, the one about maintaining a tidy home also received a high score (4.03). The respondents did not have a clear opinion about the economic and political power wielded by older adults (3.02). The impact of the generation gap on interpersonal relationships was also unclear to the respondents, as the two statements with the lowest scores were related to this topic (2.63, 2.7).

The variables were next examined through exploratory factor analysis and a sum variable was constructed. The value of the Kaiser-Meyer-Olkin (KMO) test was 0.79 and Bartlett's test of sphericity was statistically significant ( $\chi^2 = 1269.544$ ,  $p < .001$ ), which means KAOP was suitable for factor analysis (Table 2). The examination led to a model of four factors (characteristic value  $> 1.0$ ), which explained 44% of the variance between variables ( $\chi^2 118.770$  df = 74 and  $p = .001$ ). However, the four-factor model was not justifiable, as only one variable loaded onto the fourth factor (27). Finally, a sum variable was constructed based on the seven statements of the three-factor model. The first factor consisted of the statements regarding the ease of understanding older adults, their ability to reconsider their attitudes and their ability to understand younger people (explanation rate 21%). The second factor consisted of statements related to older adults' relaxing company, their wisdom and their stories of old times (explanation rate 9%). The third factor consisted of statements related to older adults' abilities to maintain their homes, their own appearance and coping independently for as long as possible (explanation rate 7%). The factors were given the following names: Factor 1 is reciprocal understanding, Factor 2 is social skills and Factor 3 is maintaining home and self. The range of the communalities of these seven variables was between 0.37 and 0.99 and the Cronbach's alpha was 0.71, which means the variables could be reliably combined as a sum variable. The relative weight of each variable was 1/7 (14.8%).

The  $\chi^2$  values with  $p < .001$  were the following: attitudes towards older people: 452.9, age: 106.1, work experience: 49.6, earlier education: 10.2, and year of study: 86.7. The respondents' age had an association with their attitudes towards older adults. The *t*-test ( $t(521) = 2.286$ ,  $p = .023$ , two-tailed) showed that the respondents aged 40 and older perceived older adults more positively (Mn 4.02, SD 0.67,  $N = 47$ ) compared to the respondents under 40 (Mn 3.83, SD 0.54,  $N = 476$ ).

Independent samples Kruskal-Wallis tests showed that respondents with more than 5 years of work experience had a more positive attitude towards older adults than respondents with no work experience or less than 5 years of work experience ( $p = .025$ ). Pairwise analysis showed that statistical difference was found between two groups; those with more than 5 years of work experience and those with work experience from one to 5 years (SPSS Bonferroni adjusted  $p = .044$ ). Another trial showed the association between the study year and attitudes towards older adults. Pairwise analysis showed a difference between two groups. The attitudes of second-year students were more positive than those of third-year students (SPSS Bonferroni adjusted  $p = .013$ ).

The Mann-Whitney *U* test showed no statistical association ( $p = .28$ ) between earlier education in the health care field (yes, no) and attitudes towards older adults.

The respondents' age had a positive correlation with their attitude towards older adults, and the oldest group was even somewhat more positive. However, previous work experience did not correlate with a positive attitude.

### 4.3. Open question

#### 4.3.1. Nurse students' suggestions on teaching gerontological nursing

Only 8% ( $n = 40$ ) of the nurse students gave no suggestions on how gerontological nursing should be taught. Most of the suggestions ( $N = 483$ ) were related to the contents of the teaching (60%,  $n = 290$ ) and didactic solutions (37%,  $n = 179$ ). Only 3% ( $n = 14$ ) were related

**Table 1**  
The nurse students' ( $n = 523$ ) background variables.

Variable	n (%)
Gender	
Female	476 (91)
Male	47 (9)
Age	
19–24	283 (54)
25–29	100 (19)
30–56	140 (27)
Year of study	
First year	184 (35)
Second year	221 (42)
Third year	118 (23)
Earlier training in the field	
Yes	225 (43)
No	298 (57)
Work experience in the field	
No work experience	89 (17)
< 1	168 (32)
1–5 years	170 (33)
> 5 years	96 (18)



Fig. 1. Nurse students' (n = 523) scores of positive statements.

Table 2

Rotated factor matrix of KAOP scale statements.

KAOP scale statements	Factor appreciation			
	1	2	3	4
Most old people are not different from anybody else: they are as easy to understand.	0.680			
Most old people are capable of new adjustments when the situation demands it.	0.580			
Most old people are very relaxing to be with.		0.680		
People grow wiser with the coming of old age.		0.582		
Most old people can generally be counted to maintain a clean, attractive home.			0.574	
Most old people seem to be quite clean and neat in their personal appearance.			0.520	
Most old people are cheerful, agreeable and good humoured.		0.316		0.892
One seldom bears old people complaining about the behaviour of the younger generation.	0.357			
Most old people need no more love and reassurance than anyone else.			0.326	
When you think about it, old people have the same faults as anybody else.	0.302			
It is evident that most old people are very different from one another.			0.327	
Most old people would prefer to continue working just as long as they possible can rather than be dependent on anybody.			0.432	
One of the most interesting and entertaining qualities of most old people is their accounts of their experiences.		0.364		
It would probably be better if most old people lived in residential units that also housed younger people.	0.346			
Old people should have more power in business and politics.		0.330		

Extraction Method: Maximum Likelihood.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

Table 3

Nurse students' suggestions (N = 483) for improving the teaching of gerontological nursing.

Theme	Statement %
Contents of teaching	60%
Interpersonal skills	
encountering those with memory illnesses	
encountering those with mental problems and substance abuse problems	
sexual health and encountering sexual minorities	
encountering aggressive patients	
Medicinal care and related questions	
Aging-related diseases	
Ergonomics and techniques for moving patients	
Managing workplace stress	
Technological skills	
Basics of running a business	
Didactic solutions	37%
Better integration of theory and practice	
Learning in genuine locations through e.g. study projects	
More innovative teaching	
Developing different teaching methods	
Teacher capabilities	3%
Teacher's interest in gerontological nursing	
Expertise and practical experience in elderly care	
Realistic and modern teaching	
Positive and inspiring attitude	

to the teacher's capabilities (Table 3).

#### 4.3.2. Suggestions related to the contents of teaching

Students suggested teaching interpersonal skills, particularly for encountering challenging older adults. Interacting with older adults who suffer from memory illnesses, mental health problems, substance abuse or aggression should be taught at school. There has been too little attention on teaching related to sexual health and matters related to sexual minorities.

There should be more theoretical instruction on illnesses related to aging, medical care and special features of caring for older adults, which should be taught by a geriatrician. Gerontological nursing was described as encumbering, which is why stress management, ergonomics and patient-moving techniques should be taught. Technological skills and the basics of managing a business should also be included in the curriculum.

#### 4.3.3. Suggestions related to didactic methods

4.3.3.1. *Better integration of theory and practice.* The respondents hoped for a better integration of theory and practice by decreasing the amount of theoretical lectures and increasing the amount of practical learning. Teaching should be more realistic and delivered in plain language. Only a few respondents wished for more research-based teaching. Gerontological nursing should be taught more, ideally integrated to several courses of the curriculum. Many also expressed an appreciation for the current way of teaching and felt it was taught satisfactorily.



**4.3.3.2. Learning in genuine environments.** Gerontological nursing should be taught in real locations where older adults live. Service homes, retirement homes and private homes are ideal places for encountering older adults. Learning and improving manual skills in a living lab setting is most effective. Some students also saw model learning as ideal. According to students, the location for clinical practice and its timing should be reconsidered. The quality of the clinical practice location is important in forming students' attitudes towards gerontological nursing.

#### 4.3.4. More innovative teaching

Respondents suggested a case-based teaching method, which would deepen students' capabilities. They did not however want to examine cases through the traditional problem-based learning (PBL) method or as written reports, but as simulation teaching and games. They also asked for a refresher on Finnish history that would enable them to understand older adults better.

Respondents wished for more courses held together with students of medicine and social services, as they teach a multi-professional approach. Respondents had experience of such courses and found them useful. They suggested online courses particularly for students who have worked as practical nurses, as they likely already have experience in gerontological nursing. Other suggestions included increasing the selection of optional courses and the possibility of choosing gerontological nursing as one's focus, as was possible before.

#### 4.3.5. Teacher expertise

Having teachers with expertise in older people's care was considered important. Teachers must know the substance, be positive and inspire their students. They should have practical experience in older people's care and not just theoretical knowledge. Respondents considered honest and realistic teaching important, along with timing the studies correctly in relation to clinical practice.

## 5. Discussion

Most students had a positive attitude towards older adults and only 3% ( $n = 13$ ) had a negative attitude, which is consistent with earlier studies (Hirvonen et al., 2004; Ryan et al., 2007; Feenstra, 2012; Matarese et al., 2013; Alquwez et al., 2018). In addition, the results support earlier studies, which report that age has a positive association with attitudes towards older adults (Engström and Fagerberg, 2011; Liu et al., 2013; Bashah and Nordin, 2016; Alquwez et al., 2018). In this study the cutoff age was 40, which may imply that older students understand aging better than younger students. Another explanation may be that the life experience of older students allows them to encounter older adults without hurry, in accordance with their rhythm of life. Younger students, whose rhythm is faster, can have trouble forming a comfortable atmosphere with older adults and accurately assessing their capabilities. The study also found that second-year students held more positive attitudes towards older adults than third-year students did. However, statistically significant differences were not found between other groups. According to Ryan et al. (2007) students with an earlier degree or experience in older people's care (Koskinen et al., 2012; Liu et al., 2013; Henderson et al., 2008), had a more positive attitude towards older adults. The results of this study partly replicate the earlier results, especially regarding students who had more than five years of work experience.

As nearly half of the respondents to this study had an earlier degree in the same field, their experience and knowledge should be utilized more in teaching gerontological nursing. Lecturers must also be able to deepen their teaching to ensure students with a previous degree do not become frustrated with the lack of new information. Earlier studies show that students' attitudes can be influenced during their education by making the contents of teaching more appealing (McLafferty et al., 2010; Engström and Fagerberg, 2011; Feenstra, 2012; Koskinen et al.,

2012) and by connecting theory to a quality clinical training facility (Rodgers and Gilmour, 2011; Koskinen et al., 2012).

According to the study by Koskinen et al. (2012), students found it important to be taught gerontological nursing as its own course. They did not consider integrating it with other courses a good way of increasing interest in older people's care. It is most useful to teach gerontological nursing as its own course and offer a gerontological perspective during later courses. Integrating gerontological nursing fully with other courses will not fulfill required competencies (cf. AACN, 2010). Studies show that knowledge of aging improves attitudes towards older adults (Liu et al., 2013).

Approximately 60% of the suggestions on improving the teaching of gerontological nursing were related to improvements to the contents of teaching in ways that are in line with the competency descriptions of the AACN (2010). The result supports earlier research, which shows that students found their interpersonal skills lacking (Henderson et al., 2008; Celik et al., 2010). Ethical capabilities and critical thinking skills, which have been identified as significant ways of improving gerontological nursing, received little attention in the responses (cf. AACN, 2010). It is the teacher's job to help students identify their own and other's attitudes, values and expectations related to aging, how they influence nursing and to support them in openly criticizing problems.

## 6. Limitations of the study

The study was cross-sectional and based on the respondents' subjective opinions. In addition, respondents' backgrounds were not assessed properly. For instance, the study did not assess whether the respondents had experience with aged people in their private lives or if they had aged family members, which might have affected their attitudes.

Another limitation was that the data were skewed, and the representative sub-samples of degree students varied. The number of first-year students was 184 (35%) second-year students 221(42%) and third-year students 118 (23%). During the year the data were collected, the university accepted 354 students, meaning the study reached slightly more than half of all first-year students. The small number of third-year respondents may be because they consider replying to a survey unnecessary to their studies. The high number of second-year respondents (60% of all second-year nurse students) may reflect the fact that gerontological nursing is taught during the second year, which makes this a topical issue for them. It is also possible that the students who responded to the questionnaire appreciated the importance of older people's care. The results can be considered approximate even outside this group.

Kogan's (1961) scale has been used extensively to measure the attitudes towards older adults of various groups, such as nurse students, in international studies. The results of this study are similar to results of earlier studies using the scale, so its validity and reliability can be considered good. However, the scale has been used in intervention studies in nursing education, in which sample sizes are small and comparable to pilot studies (Ryan et al., 2007; Rodgers and Gilmour, 2011; Feenstra, 2012). Comparing results between different countries is further hampered by the tendency to report and analyze the results as the lessening of the negative statements (e.g. Feenstra, 2012).

The response rate was fairly good (47.5%), as one of the weaknesses of electronic questionnaires is the large number of people who ignore them. As the study used both the quantitative and qualitative methods, the results provided by the respondents can be considered reliable in describing their attitudes towards older adults and wishes regarding the teaching of gerontological nursing.

### 6.1. Reliability of the KAOP scale-based sum variable

The sum variable based on the seven variables from the KAOP scale was applicable for assessing the associations between independent

variables and attitudes towards older adults and showed to be as valid as the complete KAOP scale (Erdemir et al., 2011). The results of this study were comparable to previous studies using the KAOP scale, which is why the validity and reliability of the constructed sum variable seemed to be applicable.

## 7. Conclusions

The study produced new information regarding nurse students' attitudes towards older adults and suggestions for developing the teaching of gerontological nursing. Student attitudes towards older adults were positive. Students consider older adults as individuals with their own personalities and many resources, a view that should not be lost after graduation. The study showed a demand for moving teaching away from classrooms to the real environments of older people's care. Using various methods such as lectures by experts by experience can make the topic more appealing.

## Declaration of competing interest

None.

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