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Attitudes of Social Gerontology and Physiotherapy Students Towards the Elderly

Diana Jeleč Kaker[1], Marija Ovsenik[1], Jože Zupančič[2]

[1]Alma Mater Europea, ECM Maribor, Slovenia, dianakaker@gmail.com, mara.ovsenik@gmail.com
[2]University of Lodz, School of Economy and Sociology, Poland, jomizup@gmail.com

Background/Goal. Attitudes towards older persons are particularly important for healthcare students and practitioners. The aim of our work is to analyse the attitudes of social gerontology and physiotherapy students towards elderly persons.
Method. A structured questionnaire using the Kogan Attitudes towards Older People scale (KAOP) was used to collect data. Statistical methods were applied to evaluate the data: reliability test, t-test for independent samples and bivariate correlational analysis.
Results. Social gerontology and physiotherapy students accept the elderly with awareness and respect. Few age-related prejudices and stereotypes were found among them, and they do not problematise the elderly. Social gerontology students have more positive attitudes towards the elderly than physiotherapy students do. Male students and students who live in the same household with elderly persons are more appreciative towards them, but they have more prejudices; the same applies to a lesser extent to students who do not live in the same household with an elderly person.
Conclusion. Although minor deviations from a positive attitude were found, probably resulting from different experiences with elderly people, the results of this study raise hopes that respectful relations and cooperation across age groups will continue.

Key Words: *attitude, elderly, student, social gerontology, physiotherapy, KAOP.*

1 Introduction

The population is ageing globally. In recent years, the older adult population (age 65 and older) has been increasing. Research into aging has developed rapidly over the past decade, including research on attitudes towards older adults. This applies in particular to countries with a good publicly funded health care system that guarantees universal coverage for health care services based on need, rather than the ability to pay, such as Canada (Sheets and Gallagher, 2012).

Gerontology is the study of the social, psychological, cognitive, and biological aspects of aging. *Gerontologists* include researchers and practitioners in a very wide range of fields, from biology, nursing, public health, and medicine, to economics, architecture, housing, and anthropology. Gerontology is distinguished from **geriatrics**, which is the branch of medicine that specialises in the treatment of existing disease in older adults.[1] **Social gerontology** is a multidisciplinary sub-field that specialises in studying or working with older adults. *Social gerontologists* may have degrees

[1] Wikipedia, https://en.wikipedia.org/wiki/Gerontology

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or training in social work, nursing, psychology, sociology, demography, or other social science disciplines. They are responsible for educating, researching, and advancing the broader causes of older people.[2] Social gerontology deals with advanced age and old people, who should be (regardless of age) active and productive, integrated into the life of the society, not as a supported group.

Demographic changes in the direction of a rapidly increasing contingent of elderly people often result in prejudices and deviating behaviour, which can influence mutual relations between different age groups (Ule, 2004). Often they result in discriminatory perceptions of age groups and idealising the group to which we belong. In particular, in relation to elderly people, stereotypes and stigmas are often encountered. Most frequently, they appear in the relations between the generation of retirees and generation Z.[3] Because of our perceptions of someone's traits, which we transfer onto entire groups, such perceptions mostly negatively influence our relations. This is also a possible explanation of why medical students do not choose a career in geriatrics (Meiboom et al., 2015). Negative attitudes towards older people and myths about ageing are ubiquitous. Older adults are sometimes viewed as a health care worker's burden and an obstacle to the more important work of caring for younger adults (Liu et al., 2012).

Common beliefs about the aging process are often a consequence of negative stereotypes: simplified and biased opinions about the elderly. A »typical« elderly person is often seen as a senile individual, tired, passive, without energy, and dependent on others. Children experience an elderly person as an individual with positive personal characteristics but as someone with poor physical performance. However, if the physical abilities are more important to children than the personal characteristics of the elderly, they will consequently experience them less positively than younger people will (Schaie & Willis, 2011).

The attitude towards the elderly is particularly relevant for students and practitioners in healthcare professions, such as physicians, nurses, physiotherapists, geriatric specialists, and, specifically, for social gerontologists. Although many studies have been published focusing on rather different aspects of the attitudes of health care professionals and of students of health sciences towards the elderly, conclusions are many times incomplete and inconsistent (see chapter Literature review). In our study, we focused on the attitude of physiotherapy and social gerontology students. The goal of our work is to investigate the attitude of the two student groups towards older persons and possible deviations in their attitudes.

2 Literature review

Numerous studies have been carried out among healthcare workers and healthcare-related students; they were conducted in different countries, among different professional and student groups. In addition, the focus of these studies is rather diverse. Even recently published systematic literature reviews, such as that of Liu et al. (2012) and Wang and Chonody (2013), have found that results of the studies on attitudes towards older people were inconsistent, with positive, negative and neutral attitudes being noted across various groups of health care professionals.

Bergman et al. (2014) investigated factors associated with interest in aging-related topics and careers and knowledge about the opportunities that exist in the field of gerontology. Their study includes a survey of 300 college students representing a wide range of disciplines. Most of the studies focus on health care professionals and/or students. For example, Doherty et al. (2011) report that health care workers in Ireland held generally positive attitudes towards older people; no significant differences in attitude scores measured across gender, job title, the length of service in the current role, and workplace setting were found. The study did detect a significant difference in scores between university graduates (associated with more positive attitudes) when compared to those who had not attained a university qualification. In contrast, a study carried out in the United Arab Emirates showed that education had minimal impact on the attitude of students toward old people (Sheikh et al., 2013). Moreover, medical students in Singapore have a positive attitude towards the elderly (Cheong et al., 2009). It is important to note that their medical curriculum continues to have an increasing geriatric component while the curriculum in the United Arab Emirates entailed no comprehensive module for geriatric health or ageing. Ayoğlu et al. (2014) report that »[…] medical students showed more positive attitudes toward older people than nursing students. Students who were females, whose economic income was less than expenditure, and who were not interested in working with older people after graduation showed less positive attitudes«. Liu (2014) found that the majority of Chinese undergraduate medical students surveyed had positive attitudes towards the elderly, and students with an interest in problems of the elderly and were more willing to consider careers in gerontology.

Others, for example, Turan et al. (2015), studied the attitude of a specific group (in their case, physiotherapy students) towards older people and found that they were more positive than students in other health disciplines. However, they found no differences in the attitudes of health science

2 Wikipedia, https://en.wikipedia.org/wiki/Gerontology#Social_gerontology
3 Wikipedia, https://en.wikipedia.org/wiki/Generation_Z

students towards older persons throughout Turkey. Wang et al. (2009) concluded that female students who were younger and studying nursing were more likely to have more positive attitudes than older males studying medicine.

While most of the studies report a mostly positive attitude towards the elderly, an investigation by Kearney et al.,(2000) among a specific group of medical staff (oncology healthcare professionals) found that regardless of gender, profession, clinical experience, and specialist education, persistently negative attitudes were displayed towards elderly people.

Previous relations and contact with the elderly may have a significant impact on someone's attitude towards them. For example, Khan (2011) states that students who had cared for an older adult reported a more positive attitude toward older adults than other students who had not had such an experience. Preferences to work with older people and knowledge of ageing appeared to be associated with positive attitudes towards older people (Liu et al., 2012).

Eaton et al. (2015) presented a mixed method study in which 12 nursing students and 12 older adult long-term care residents collaborated in a transformational learning experience. Although positive overall, student attitudes varied in the initial status and rate of change. Students who interacted most frequently with older adults had attitudes that were more neutral.

Intercultural studies of the attitude towards the elderly revealed some differences between eastern and western countries. For example, a survey among four countries (Japan, China, Taiwan, and Vietnam) in Eastern cultures and in two countries (USA and UK) in the West showed that the level of knowledge about aging in Western countries is significantly higher than that in Eastern countries, and attitudes toward aging are more positive in the western countries compared to the eastern countries (Huang, 2013). This suggests that the tradition of respecting older adults in Eastern cultures may have weakened gradually, and it appears industrialisation devalues aging populations in Eastern countries but not in Western countries.

While many studies address the attitude of healthcare professionals and students of different specialisations towards the elderly, our literature research identified no investigations about the attitude of social gerontology students. Therefore, we carried out a survey among social gerontology and physiotherapy students in Slovenia, with the aim to investigate their attitudes towards the elderly. Based on the literature survey, we posed the following research questions:

- To what extent do students appreciate (positive attitude) or reject (negative attitude) the elderly?
- Are there any significant differences in the attitude of physiotherapy students and social gerontology students?
- Does the attitude towards the elderly depend on the student's gender?
- Does the attitude towards the elderly depend on the students' age?
- Are there any significant differences in the attitude towards the elderly between students who live in the same household with an elderly person and other students?

The last research question is based on the assumption that the home environment impact students' attitude. The influence of environment on attitudes was also found in some previous studies, for example Khan (2011) and Eaton et al. (2015).

3 Methods

Survey data was collected from students of physiotherapy and social gerontology (N=107) at Alma Mater Europaea, a higher education institution in Maribor, Slovenia, via close-ended structured questionnaire. Questionnaires were distributed to students during the lectures; they were asked to return the completed questionnaire within one week.

Instruments. We used a Slovenian translation of Kogan's Attitudes toward Old People Scale (KAOP), using matched pair items. The same instrument, first presented in (Kogan 1961), has been used in many studies, including most of the investigations summarised in the Literature review (Section 2). In non-English speaking countries, the questionnaire was usually somewhat adapted to the language and to the surveyed sample, for example to Italian (Matarese et al., 2012) or to Turkish (Kiliç & Adibelli, 2011).

KAOP consists of two main latent constructs. Seventeen items are negatively worded (KAOP-) statements while the others sixteen items (KAOP+) are presented positively worded, both in random order. The scale is designed in the form of a summed Likert scale of agreement with seven-point response categories that range from »strongly disagree« (1) to »strongly agree« (7). Negatively-worded statements form the construct »prejudice«, for which a higher total score indicates a more negative or prejudicial attitude towards older persons. Positively-worded statements form the construct »appreciation«, for which a higher total score indicates a more positive or appreciative attitude towards older persons. The higher the gap between prejudice and appreciation, the more positive or negative the attitude towards older people is; the smaller the gap between prejudice and appreciation, the more neutral the attitude towards older people is. The matched items do not have perfectly identical meanings, despite the attempts by Kogan to build logical opposites. The feelings and the experiences described by the matched statements are logical but not necessarily psychological opposites (Matarese et al., 2012).

Reliability. Kogan (1961) used odd-even Spearman-Brown reliability coefficients for the negative scale, ranging from 0.73 to 0.83 for his sample of 168 respondents (Khan, 2011). Cronbach's alpha coefficient as a measure of internal

consistency of the constructs was used in order to confirm scale reliability. Both scales turned out to be reliable, as Cronbach's alpha coefficient for the construct »prejudice« is 0.81 and for »appreciation« 0.77.

Data analysis. Data collected via questionnaire was analysed using the statistical program IBM SPSS 22.0. Different statistical methods were used: descriptive statistics, reliability test, t-test for independent samples and bivariate statistical analysis. We considered relations and differences to be significant if the statistical parameter p was less than 0.05 ($p<0.05$). The degree of positive or negative attitude was determined on the basis of average values.

4 Results

In November and December 2015, 120 questionnaires were distributed among students of physiotherapy and social gerontology. A total of 107 questionnaires were returned, yielding an 89% response rate. Socio-demographic characteristics of the respondents are presented in Table 1.

Table 2 presents descriptive statistics for items that indicate negative attitudes towards the elderly. The lower the average value of an item is, the less negative the attitude of the respondents is towards elderly people. The higher the average value is, the more negative the attitude is. The item »… have a negative influence on a neighbourhood« was rated the lowest (M=1.78; SD=1.320), indicating the lowest level of prejudices related to this item. The next three lowest rated items are »… make others feel ill at ease« (M=2.41; SD=1.659) »... have shabby homes« (M=2.44; SD=1.480), »... have irritating faults« (M=2.46; SD=1.449) and »... bore others with their stories« (M=2.49; SD=1.519).

The strongest prejudice related to elderly people was the diversity of the elderly compared to younger (item »…are different)« (M=5.22; SD=2.0), »… have excessive demands for love« (M=4.28; SD=1.99), the inability of the elderly to change (»... are unable to change«) with (M=3.76; SD=2.041) and »… complain about the young« (M=3.71; SD=1.682).

Table 3 presents descriptive statistics for items that indicate positive attitudes towards the elderly. The higher the average score of an item, the more positive the attitude towards the elderly is, and vice versa. The items for which appreciation of students is the strongest are »...are different from one another« (M=5.42; SD=1.778), »... prefer to work as long as they can« (M=5.27; SD=1.418) and believing that elderly »…are no different from anyone else« (M=5.03; SD=1.861).

The average level of appreciation among students is 4.56 (SD=0.840), and the average level of prejudice is 2.78 (SD=0.992), which indicates that the students are more likely to have an appreciative attitude towards the elderly than prejudicial, negative attitudes. We must be aware that appreciation and prejudices do not exclude each other. The measurement was carried out so that an individual can have prejudices, but simultaneously be appreciative towards the elderly.

The fact that the level of appreciation and the level of prejudices are not necessarily correlated (interconnected) is also evident from the correlation matrix in Table 4: most of the items of positive and negative attitudes towards elderly are not correlated. There are some statistically significant correlations, but they are weak. Positive and negative correlations can be observed.

Table 1: Survey sample

	f (%)		f (%)
Gender		**Specialisation**	
Male	38 (35.5)	Physiotherapy	61 (57)
Female	69 (64.5)	Social Gerontology	46 (43)
Current education		**Elderly members among household members**	
Undergraduate	99(92.5)	No	55 (51.4)
Graduate	6 (5.6)	Yes	52 (48.6)
Doctoral study	2 (1.9)		
Age			
to 20 years	36 (33.6)		
21–23 years	38 (35.5)		
above 23 years	33 (30.8)		

Table 2: Descriptive statistics for items, which indicate negative attitude towards the elderly

Item number	The elderly ...	N	Min	Max	Mean	Std. deviation
1	... are irritable, grouchy and unpleasant	107	1	7	2.83	1.533
2	... have a negative influence on a neighbourhood	107	1	7	1.78	1.320
3	... are always prying into the affairs of others	107	1	7	2.95	1.488
4	... are untidy	107	1	7	2.63	1.593
5	... complain about the young	107	1	7	3.71	1.682
6	... bore others with their stories	107	1	7	2.49	1.519
7	... have shabby homes	105	1	7	2.44	1.480
8	... have irritating faults	107	1	7	2.46	1.449
9	... make others feel ill at ease	107	1	7	2.41	1.659
10	... are much alike	107	1	7	3.03	1.729
11	... are unable to change	107	1	7	3.76	2.041
12	... have excessive demands for love	107	1	7	4.28	1.990
13	... have too much influence in society	106	1	7	2.95	1.641
14	... quit work when they become pensioners	106	1	7	2.81	1.913
15	Wisdom does not come with advancing age	107	1	7	3.40	2.009
16	... should live in special residences	107	1	7	2.71	1.976
17	... are different	106	1	7	5.22	2.000

Table 3: Descriptive statistics for items that indicates positive attitude towards elderly

Item number	The elderly...	N	Min	Max	Mean	Std. deviation
1	... mind their own business	107	1	7	3.99	1.622
2	... have clean, attractive homes	107	1	7	4.24	1.547
3	... should have more power in society	107	1	7	4.02	1.721
4	... are relaxing to be with	107	1	7	4.95	1.383
5	... are cheerful, agreeable and good humoured	107	1	7	4.79	1.358
6	... grow wiser with advancing age	107	1	7	4.39	1.664
7	... are clean and neat	107	2	7	4.56	1.290
8	... prefer to work as long as they can	107	1	7	5.27	1.418
9	It is nice when they speak about their past	107	1	7	4.95	1.645
10	... seldom complain about the young	107	1	7	3.80	1.645
11	... are capable of new adjustment	107	1	7	3.93	1.647
12	Neighbourhoods are nice when integrated with them	107	1	7	4.76	1.619
13	... need no more love than others	107	1	7	4.04	2.032
14	... are different from one another	106	1	7	5.42	1.778
15	... have the same faults as the young	107	1	7	4.62	1.902
16	... are no different from anyone else	107	1	7	5.03	1.861

Table 4: Correlation matrix: relations between positive and negative attitude towards elderly

		Indicators of positive attitude towards elderly															
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Indicators of negative attitude towards elderly	**1**	-.03	.15	-.12	-.16	-.11	-.16	-.04	-.06	-.39**	-.09	-.04	-.10	.17	-.18	-.16	-.17
	2	-.01	-.05	-.17	-.26**	-.16	-.23*	-.09	-.15	-.24*	.08	-.04	.01	.09	-.20*	-.15	-.31**
	3	-.18	-.09	-.35**	-.29*	-.27**	-.24*	-.12	.01	-.24*	-.07	-.29**	-.02	.16	-.10	-.06	-.05
	4	-.15	.05	.06	.00	-.09	-.06	-.12	.10	-.10	-.04	-.05	-.08	-.02	-.02	-.04	.05
	5	-.05	-.07	-.22*	-.21*	-.28**	-.49**	-.19*	-.11	-.29**	-.15	-.27**	-.11	.22*	-.01	-.18	-.17
	6	-.05	.27**	-.09	-.15	-.11	-.06	-.02	-.16	-.23*	.05	-.16	-.04	.12	-.03	-.17	-.19
	7	.05	.08	.04	-.03	-.09	-.02	.00	.02	-.22*	.04	-.06	-.06	.05	-.07	-.06	-.08
	8	-.15	-.02	-.24*	-.20*	-.27**	-.26**	-.09	.00	-.25**	-.11	-.18	.04	.13	-.10	-.20*	-.19*
	9	-.09	.12	.05	-.05	-.02	-.01	.04	.09	-.16	.00	.04	-.04	.13	-.18	-.08	-.09
	10	-.08	-.07	-.07	-.07	-.14	-.08	-.21*	.02	-.11	.09	-.11	-.06	.01	-.13	-.06	-.08
	11	-.17	.13	-.19*	-.03	-.10	-.06	-.20*	-.06	-.08	-.16	-.28**	-.08	.01	.04	-.08	.07
	12	.12	-.14	-.04	.07	.03	.23*	-.09	.04	.16	-.09	-.27**	.10	-.04	.14	.11	.07
	13	.02	.17	-.12	-.10	.01	.06	.09	-.01	-.07	.07	-.02	.06	.05	-.07	-.08	.00
	14	.08	-.05	.08	-.10	-.15	-.04	.13	-.08	-.04	.17	.16	-.03	.12	-.20*	-.02	-.07
	15	-.08	-.12	-.32**	-.36**	-.31**	-.23*	-.10	-.21*	-.11	.04	-.27**	.02	.12	-.02	-.07	-.19
	16	.19*	.10	.23*	.11	.04	.12	.13	.08	-.21*	.14	.29**	-.11	.10	-.21*	-.04	-.09
	17	.03	.08	-.21*	.04	-.04	-.04	-.18	.03	.31**	-.15	-.17	.10	.02	.30**	.00	-.09

***. Correlation is significant at the 0.01 level (2-tailed).*
**. Correlation is significant at the 0.05 level (2-tailed).*

We tested the relation between students' age and their attitudes towards the elderly using bivariate correlation analysis, using Pearson's correlation coefficient for interpretation (Table 5). We tested correlations on the level of individual items. The values of Pearson's correlations coefficient were between -0.207 and 0.090, which indicates only a weak relation. Age is statistically significantly correlated only with the item »... seldom complain about the young« (ρ=-0.207; $p<0.05$). This is a weakly negative correlation that means that the older the students are, the more they think that the elderly »... seldom complain about the young«, while younger students more frequently recognise complaining of the elderly about the young. The remaining relations are not statistically significant.

If we observe the attitude towards the elderly on the level of a construct, we can conclude that the students' attitudes are related to neither age, nor to prejudice, nor to positive attitudes toward the elderly. Relations between age and individual items of the attitude toward elderly also are not statistically significant if considered separately by specialisation (physiotherapists, social gerontologists).

We tested the differences in the relation to the elderly using an independent samples t-test. Table 6 presents the results of the t-test for testing the differences in prejudices towards the elderly depending on gender. Table 7 presents the results of the t-test of differences in the appreciation depending on the student's gender. There are minor differences among the students related to gender, which are mostly not statistically significant, except the differences in the perception of the elderly that complain about the young ($t=2.201$; $p<0.05$). This is more present among male students (M=4.18; SD=1.642) than female ones (M=3.45; SD=1.659), which indicates that male students have significantly more negative attitudes towards the elderly than female students do regarding this item.

In contrast, female students have significantly ($t=2.289$; $p<0.05$) less positive attitudes towards the elderly than male students do (M=4.63; SD=1.837) regarding the item »... need no more love than others«.

Male students have, in general, somewhat more rejecting (negative) attitudes toward the elderly than female students do, while they are also more appreciative. This appears to be a conflicting finding, but it makes sense if

Table 5: Pearson's correlation coefficients for correlations between attitudes towards the elderly indicators and student's age, and segmented regarding specialisation

The Elderly ...	**AGE**	**AGE (physiotherapy)**	**AGE (social gerontology)**
... are irritable, grouchy and unpleasant	.027	.171	-.101
... have a negative influence on a neighbourhood	-.074	-.074	.027
... are always prying into the affairs of others	-.131	-.112	-.057
... are untidy	.063	.010	.121
... complain about the young	-.025	-.006	-.020
... bore others with their stories	-.099	.091	-.270
... have shabby homes	.052	.079	.033
... have irritating faults	-.034	.006	-.001
... make others feel ill at ease	-.011	.092	-.129
... are much alike	-.134	-.179	-.095
... are unable to change	-.008	-.032	.029
... have excessive demands for love	.002	-.169	.226
... have too much influence in society	.036	.251	-.145
... quit work when they become pensioners	.007	-.071	.144
Wisdom does not come with advancing age	-.107	-.033	-.140
... should live in special residences	.002	-.003	-.015
... are different	.090	.136	.060
... mind their own business	-.056	-.036	-.061
... have clean, attractive homes	.004	.063	-.142
... should have more power in society	.010	-.092	.041
... are relaxing to be with	.050	-.021	.024
... are cheerful, agreeable and good humoured	-.042	-.021	-.149
... grow wiser with advancing age	-.133	-.084	-.215
... are clean and neat	.024	.124	-.147
... prefer to work as long as they can	.044	-.006	.088
It is nice when they speak about their past	-.091	-.178	-.024
... seldom complain about the young	**-.207***	-.201	-.197
... are capable of new adjustment	-.013	-.163	.123
Neighbourhoods are nice when integrated with them	-.095	-.225	.018
... need no more love than others	-.139	-.028	-.253
... are different from one another	-.054	-.025	-.074
... have the same faults as the young	-.143	-.094	-.200
... are no different from anyone else	-.089	-.091	-.107
PREJUDICE	-.037	.017	-.060
APPRECIATION	-.079	-.116	-.106

**. Correlation is significant at the 0.05 level (2-tailed).*

Table 6: Results of t-test - testing differences in prejudices depending on the gender

	Male (n=38)	Female (n=69)	
The Elderly ...	**M (SD)**	**M (SD)**	**t (p)**
... are irritable, grouchy and unpleasant	2.66 (1.279)	2.93 (1.657)	-0.87 (0.39)
... have a negative influence on a neighbourhood	1.82 (1.249)	1.75 (1.366)	0.232 (0.82)
... are always prying into the affairs of others	2.76 (1.24)	3.06 (1.608)	-0.98 (0.33)
... are untidy	2.87 (1.492)	2.49 (1.642)	1.169 (0.24)
... complain about the young	4.18 (1.642)	3.45 (1.659)	2.201 (**0.03**)
... bore others with their stories	2.68 (1.435)	2.38 (1.563)	1.001 (0.32)
... have shabby homes	2.38 (1.299)	2.47 (1.578)	-0.304 (0.76)
... have irritating faults	2.37 (1.261)	2.51 (1.549)	-0.473 (0.64)
... make others feel ill at ease	2.58 (1.518)	2.32 (1.736)	0.774 (0.44)
... are much alike	3.29 (1.659)	2.88 (1.762)	1.163 (0.25)
... are unable to change	3.68 (1.933)	3.8 (2.111)	-0.273 (0.79)
... have excessive demands for love	3.84 (1.853)	4.52 (2.034)	-1.706 (0.09)
... have too much influence in society	2.95 (1.541)	2.96 (1.705)	-0.025 (0.98)
... quit work when they become pensioners	3.05 (1.692)	2.68 (2.026)	0.971 (0.33)
Wisdom does not come with advancing age	3.47 (2.023)	3.36 (2.014)	0.273 (0.79)
... should live in special residences	2.61 (1.911)	2.77 (2.023)	-0.406 (0.69)
... are different	4.81 (2.106)	5.43 (1.921)	-1.541 (0.13)
PREJUDICE	2.85 (0.777)	2.75 (1.096)	0.557 (0.58)

Table 7: Results of t-test - testing differences in appreciation depending on the gender

	Male (n=38)	Female (n=69)	
The Elderly ...	**M (SD)**	**M (SD)**	**t (p)**
... mind their own business	3.95 (1.754)	4.01 (1.558)	-0.204 (0.84)
... have clean, attractive homes	4.47 (1.484)	4.12 (1.577)	1.146 (0.25)
... should have more power in society	3.97 (1.684)	4.04 (1.753)	-0.200 (0.84)
... are relaxing to be with	4.92 (1.124)	4.97 (1.514)	-0.178 (0.86)
... are cheerful, agreeable and good humoured	5.00 (1.162)	4.68 (1.450)	1.164 (0.25)
... grow wiser with advancing age	4.16 (1.586)	4.52 (1.703)	-1.083 (0.28)
... are clean and neat	4.63 (1.101)	4.52 (1.389)	0.420 (0.68)
... prefer to work as long as they can	5.29 (1.206)	5.26 (1.531)	0.106 (0.92)
It is nice when they speak about their past	5.32 (1.397)	4.75 (1.744)	1.820 (0.07)
... seldom complain about the young	3.79 (1.63)	3.81 (1.665)	-0.066 (0.95)
... are capable of new adjustment	4.11 (1.539)	3.83 (1.706)	0.838 (0.40)
Neighbourhoods are nice when integrated with them	5.00 (1.185)	4.62 (1.808)	1.297 (0.20)
... need no more love than others	4.63 (1.837)	3.71 (2.073)	2.289 (**0.02**)
... are different from one another	5.39 (1.636)	5.44 (1.864)	-0.128 (0.90)
... have the same faults as the young	4.50 (1.797)	4.68 (1.967)	-0.470 (0.64)
... are no different from anyone else	4.95 (1.643)	5.07 (1.980)	-0.331 (0.74)
APPRECIATION	4.61 (0.715)	4.54 (0.905)	0.391 (0.7)

we consider the logics of the measurement instrument, which not only measures the attitude toward the elderly as a uniform dimension; an individual can have to some extent positive as well as negative attitudes toward the elderly. If we reduced the two dimensions into one, we would lose the variability in the attitudes toward the elderly, which (according to the existing definition) spans from strongly negative to strongly positive.

An independent t-test was also used to test the attitudes towards the elderly depending on the specialisation of the students. Table 8 presents the results of the t-test for the differences in prejudices toward the elderly; in Table 9 the results of the t-test for the differences in appreciation depending on specialisation are given. Students demonstrated some statistically significant differences related to their specialisation: social gerontology students have less negative attitudes in the item »The elderly have a negative influence on a neighbourhood« ($t=2.370$; $p<0.05$), »... the elderly are always prying into the affairs of others« ($t=3.119$; $p<0.001$), »… the elderly have irritating faults« ($t=2.494$; $p<0.01$) and »wisdom does not come with advancing age« ($t=2.288$; $p<0.05$). On average, the attitude of social gerontology students is less negative than the attitude of physiotherapy students.

On average, social gerontology students also have a more positive attitude towards the elderly than students of physiotherapy do. Statistically significant is the more positive attitude of social gerontology students regarding the items »… the elderly should have more power in society« ($t=-2.455$; $p<0.05$), »… the elderly are relaxing to be with« ($t=-3.430$; $p<0.001$) and »… the elderly are cheerful, agreeable and good humoured« ($t=-2.113$, $p<0.05$).

Differences in the attitudes toward the elderly depending on the presence of an elderly person in the students' households were tested using an independent samples t-test. Table 10 presents the results of the t-test of the differences in prejudices toward the elderly, and Table 11 the results of the t-test of the differences in appreciation. The results indicate that students who live in the same household with an elderly person demonstrate statistically significant differences in their attitude toward the elderly: they have significantly less negative (rejecting) attitudes in the items »… are untidy« ($t=2.299$; $p<0.05$), »… are much alike« ($t=2.336$; $p<0.05$)

Table 8: Results of t-test - testing differences in prejudices depending on study specialisation

	physiotherapy (n=61)	**Social gerontology (n=46)**	
The Elderly ...	**M (SD)**	**M (SD)**	**t (p)**
... are irritable, grouchy and unpleasant	3.07 (1.601)	2.52 (1.394)	1.837 (0.07)
... have a negative influence on a neighbourhood	2.03 (1.516)	1.43 (0.910)	2.370 (**0.02**)
... are always prying into the affairs of others	3.33 (1.535)	2.46 (1.277)	3.119 (**<0.01**)
... are untidy	2.59 (1.616)	2.67 (1.578)	-0.268 (0.79)
... complain about the young	3.84 (1.753)	3.54 (1.588)	0.890 (0.38)
... bore others with their stories	2.62 (1.428)	2.30 (1.631)	1.075 (0.29)
... have shabby homes	2.48 (1.479)	2.39 (1.498)	0.303 (0.76)
... have irritating faults	2.75 (1.578)	2.07 (1.162)	2.494 (**0.01**)
... make others feel ill at ease	2.44 (1.669)	2.37 (1.665)	0.224 (0.82)
... are much alike	2.98 (1.727)	3.09 (1.749)	-0.305 (0.76)
... are unable to change	3.80 (2.015)	3.70 (2.096)	0.269 (0.79)
... have excessive demands for love	4.34 (2.007)	4.20 (1.985)	0.381 (0.70)
... have too much influence in society	3.10 (1.504)	2.76 (1.804)	1.055 (0.29)
... quit work when they become pensioners	2.88 (2.108)	2.72 (1.642)	0.441 (0.66)
Wisdom does not come with advancing age	3.77 (2.124)	2.91 (1.749)	2.288 (**0.02**)
... should live in special residences	2.61 (2.002)	2.85 (1.955)	-0.623 (0.53)
... are different	5.33 (2.072)	5.07 (1.914)	0.682 (0.50)
PREJUDICE	2.89 (1.004)	2.64 (0.967)	1.347 (0.18)

Table 9: Results of t-test - testing differences in appreciation depending on study specialisation

	Physiotherapy (n=61)	**Social Gerontology (n=46)**	
The Elderly ...	**M (SD)**	**M (SD)**	**t (p)**
... mind their own business	4.08 (1.686)	3.87 (1.544)	0.669 (0.51)
... have clean, attractive homes	4.08 (1.706)	4.46 (1.295)	-1.291 (0.20)
... should have more power in society	3.67 (1.589)	4.48 (1.798)	-2.455 (**0.02**)
... are relaxing to be with	4.57 (1.335)	5.46 (1.295)	-3.430 (**<0.001**)
... are cheerful, agreeable and good humoured	4.56 (1.373)	5.11 (1.286)	-2.113 (**0.04**)
... grow wiser with advancing age	4.34 (1.721)	4.46 (1.601)	-0.344 (0.73)
... are clean and neat	4.43 (1.310)	4.74 (1.255)	-1.246 (0.22)
... prefer to work as long as they can	5.21 (1.416)	5.35 (1.433)	-0.485 (0.63)
It is nice when they speak about their past	4.79 (1.724)	5.17 (1.525)	-1.208 (0.23)
... seldom complain about the young	3.90 (1.535)	3.67 (1.790)	0.707 (0.48)
... are capable of new adjustment	3.79 (1.593)	4.11 (1.716)	-1.001 (0.32)
Neighbourhoods are nice when integrated with them	4.57 (1.658)	5.00 (1.549)	-1.354 (0.18)
... need no more love than others	4.15 (2.015)	3.89 (2.068)	0.644 (0.52)
... are different from one another	5.52 (1.882)	5.30 (1.645)	0.608 (0.54)
... have the same faults as the young	4.69 (1.996)	4.52 (1.786)	0.447 (0.66)
... are no different from anyone else	4.95 (1.944)	5.13 (1.759)	-0.493 (0.62)
APPRECIATION	4.43 (0.774)	4.74 (0.898)	-1.895 (0.06)

Table 10: Results of the t-test testing differences in prejudices related to presence of an elderly in the household where the student is living.

	No elderly person in household (n=55)	**Elderly person in household (n=52)**	
The Elderly ...	**M (SD)**	**M (SD)**	**t (p)**
... are irritable, grouchy and unpleasant	2.98 (1.394)	2.67 (1.665)	1.042 (0.30)
... have a negative influence on a neighbourhood	1.75 (1.022)	1.81 (1.585)	-0.243 (0.81)
... are always prying into the affairs of others	3.13 (1.441)	2.77 (1.529)	1.247 (0.22)
... are untidy	2.96 (1.598)	2.27 (1.523)	2.299 (**0.02**)
... complain about the young	3.87 (1.611)	3.54 (1.754)	1.027 (0.31)
... bore others with their stories	2.60 (1.559)	2.37 (1.482)	0.797 (0.43)
... have shabby homes	2.54 (1.397)	2.33 (1.571)	0.703 (0.48)
... have irritating faults	2.49 (1.332)	2.42 (1.576)	0.241 (0.81)
... make others feel ill at ease	2.40 (1.486)	2.42 (1.840)	-0.072 (0.94)
... are much alike	3.40 (1.628)	2.63 (1.760)	2.336 (**0.02**)
... are unable to change	4.16 (1.782)	3.33 (2.220)	2.142 (**0.03**)
... have excessive demands for love	4.09 (1.818)	4.48 (2.156)	-1.008 (0.32)
... have too much influence in society	2.91 (1.651)	3.00 (1.645)	-0.289 (0.77)
... quit work when they become pensioners	3.00 (2.028)	2.62 (1.784)	1.035 (0.30)
Wisdom does not come with advancing age	3.25 (1.878)	3.56 (2.146)	-0.779 (0.44)
... should live in special residences	2.69 (1.698)	2.73 (2.250)	-0.103 (0.92)
... are different	5.41 (1.732)	5.02 (2.245)	0.994 (0.32)
PREJUDICE	2.92 (0.861)	2.64 (1.104)	1.481 (0.14)

Table 11: Results of t-test testing the differences in appreciation related to the presence of an elderly person in the household where the student is living.

	No elderly person in household (n=55)	Elderly person in household (n=52)	
The Elderly ...	**M (SD)**	**M (SD)**	**t (p)**
... mind their own business	3.98 (1.509)	4.00 (1.749)	-0.058 (0.95)
... have clean, attractive homes	4.16 (1.525)	4.33 (1.581)	-0.544 (0.59)
... should have more power in society	3.95 (1.615)	4.10 (1.839)	-0.451 (0.65)
... are relaxing to be with	4.84 (1.344)	5.08 (1.426)	-0.898 (0.37)
... are cheerful, agreeable and good humoured	4.62 (1.367)	4.98 (1.336)	-1.386 (0.17)
... grow wiser with advancing age	4.35 (1.613)	4.44 (1.731)	-0.300 (0.77)
... are clean and neat	4.40 (1.314)	4.73 (1.254)	-1.331 (0.19)
... prefer to work as long as they can	5.02 (1.472)	5.54 (1.320)	-1.921 (0.06)
It is nice when they speak about their past	5.00 (1.711)	4.90 (1.587)	0.301 (0.76)
... seldom complain about the young	3.87 (1.678)	3.73 (1.622)	0.444 (0.66)
... are capable of new adjustment	3.76 (1.710)	4.10 (1.575)	-1.044 (0.30)
Neighbourhoods are nice when integrated with them	4.58 (1.536)	4.94 (1.697)	-1.153 (0.25)
... need no more love than others	3.85 (1.890)	4.23 (2.175)	-0.957 (0.34)
... are different from one another	5.75 (1.404)	5.08 (2.067)	1.928 (0.06)
... have the same faults as the young	4.49 (1.894)	4.75 (1.919)	-0.703 (0.48)
... are no different from anyone else	5.24 (1.753)	4.81 (1.961)	1.194 (0.24)
APPRECIATION	4.48 (0.778)	4.65 (0.900)	-1.001 (0.32)

and »… are unable to change« ($t=2.142$, $p<0.05$). In addition, the general attitude of students who live in the same household with an elderly person is less negative than the attitude of students who live in a household without one.

Students who live in the same household with an elderly person have on average a more positive attitude to the elderly than students who do not live with one, but the differences are not statistically significant ($p>0.05$).

We can observe that a student's specialisation as well as the fact that he or she lives in the same household with an elderly person, appeared as key external factors influencing the attitude towards the elderly. Therefore, we will also check the differences in attitude towards the elderly depending on their specialisation and on the fact that they live in the same household with an elderly person.

The results presented separately for the two groups of students (physiotherapy and social gerontology), depending on whether they live in the same household with an elderly person or not, highlight the statistical characteristics of the two groups. Table 12 presents differences in average values for individual negative attitude items and the result of the t-test for independent samples. Table 13 shows differences in arithmetic means for each item of appreciation attitude towards the elderly and the results of the t-test.

Where »mean difference« and test statistics are positive, students of social gerontology have fewer prejudices towards the elderly than students of physiotherapy do. We found that differences between students of the two specialisations in negative attitudes towards the elderly is larger in the group that does not live in the same household with an elderly person, with a »mean difference« (MD=0.37) than in the group of students who live with an elderly person (MD=0.15). There are no statistically significant differences between students who live in the same household with an elderly person, regardless of specialisation. Students of social gerontology who do not live with an elderly had statistically significantly fewer prejudices than students of physiotherapy who also do not live with an elderly person in the same household, regarding the items »… are irritable, grouchy and unpleasant« ($t=2.126$; $p<0.05$), »…. have a negative influence on a neighbourhood« ($t=3.122$; $p<0.01$), »…. are always prying into the affairs of others« ($t=2.817$; $p<0.01$) and »… have irritating faults« ($t=2.766$, $p<0.01$).

If the values in the column »Mean difference« and test statistics column of an item are positive, then social gerontology students have less positive attitudes towards the elderly than physiotherapy students do. Negative values under »Mean difference« and test statistics mean that stu-

Table 12: Results of the t-test testing differences in prejudices related to the presence of an elderly person in the household where the student is living and to student's specialisation.

	No elderly person in household		Elderly person in household	
The Elderly ...	**Mean difference**	**t (p)**	**Mean difference**	**t (p)**
... are irritable, grouchy and unpleasant	0.78	2.126 (**0.04**)	0.30	0.638 (0.53)
... have a negative influence on a neighbourhood	0.81	3.122 (**<0.01**)	0.38	0.842 (0.40)
... are always prying into the affairs of others	1.04	2.817 (**0.01**)	0.70	1.666 (0.10)
... are untidy	0.23	0.528 (0.60)	-0.40	-0.935 (0.35)
... complain about the young	0.74	1.708 (0.09)	-0.17	-0.342 (0.73)
... bore others with their stories	0.10	0.242 (0.81)	0.55	1.343 (0.19)
... have shabby homes	0.33	0.855 (0.40)	-0.16	-0.359 (0.72)
... have irritating faults	0.94	2.766 (**0.01**)	0.42	0.944 (0.35)
... make others feel ill at ease	0.04	0.109 (0.91)	0.10	0.198 (0.84)
... are much alike	-0.33	-0.731 (0.47)	0.15	0.310 (0.76)
... are unable to change	-0.08	-0.162 (0.87)	0.33	0.526 (0.60)
... have excessive demands for love	-0.43	-0.868 (0.39)	0.75	1.254 (0.22)
... have too much influence in society	0.28	0.623 (0.54)	0.39	0.851 (0.40)
... quit work when they become pensioners	0.15	0.268 (0.79)	0.20	0.396 (0.69)
Wisdom does not come with advancing age	0.67	1.328 (0.19)	1.05	1.843 (0.07)
... should live in special residences	0.19	0.410 (0.68)	-0.70	-1.116 (0.27)
... are different	0.66	1.400 (0.17)	-0.12	-0.195 (0.85)
PREJUDICE	0.37	1.621 (0.11)	0.15	0.469 (0.64)

dents of social gerontology have more positive, appreciative attitudes towards the elderly than physiotherapy students do. Differences in appreciative attitudes among students of both specialisations are higher in the group of students who live with an elderly person (MD=0.37) than in the group which does not (MD=0.25)

Social gerontology students who do not live with an elderly person in a common household have a significantly more appreciative attitude towards elderly than physiotherapy students who do not live with an elderly person do. The differences appeared in the following items: »… should have more power in society« ($t=-2.140$; $p<0.05$), »… are relaxing to be with« ($t=-2.531$, $p<0.05$) and »… neighbourhoods are nice when integrated with them« ($t=-2.408$, $p<0.05$). In contrast, students of social gerontology who live in the same household with an elderly person are statistically significantly more appreciative than students of physiotherapy who live with an elderly person. The statistically significant items are »… relaxing to be with« ($t=-2.320$, $p<0.05$) and »… are cheerful, agreeable and good humoured« ($t=-2.041$; $p<0.05$). Students of social gerontology are also significantly more in favour of older people, expressing the opinion that the elderly are relaxing to be with, regardless of whether they live with the elderly or not.

5 Discussion

The research offered insights into the attitudes of students of social gerontology and physiotherapy towards the elderly population.

Our first research question was: to what extent do students appreciate (positive attitude) or reject (negative attitude) the elderly? The results show that on average the appreciation (measured with a KAOP questionnaire) of older people among students is 4.56, while the average dismissive attitude (prejudices) is 2.78. This indicates that students are on average more appreciative towards the elderly than they have prejudices against them. The degree of positive attitude goes beyond negative attitude. The level of dismissive attitude, which is 2.78 measured on a seven-point Likert scale, can be described as very low, and we can say that students are appreciative of the elderly.

Our study shows that students of social gerontology, on average, are more appreciative of older people and at the same time have fewer prejudices about older people than students of physiotherapy do. Students of social gerontology have significantly less negative attitudes towards older people than students of physiotherapy do, regarding the statements that »older people have a negative impact

Table 13: Results of a t-test testing differences in appreciation related to presence of an elderly in the household where the student is living, and to specialisation

	No elderly person in household		Elderly person in household	
The Elderly ...	**Mean difference**	**t (p)**	**Mean difference**	**t (p)**
... mind their own business	0.63	1.563 (0.12)	-0.24	-0.478 (0.63)
... have clean, attractive homes	-0.15	-0.367 (0.72)	-0.62	-1.528 (0.13)
... should have more power in society	-0.91	-2.140 (**0.04**)	-0.70	-1.367 (0.18)
... are relaxing to be with	-0.88	-2.531 (**0.01**)	-0.89	-2.320 (**0.02**)
... are cheerful, agreeable and good humoured	-0.38	-1.027 (0.31)	-0.74	-2.041 (**0.05**)
... grow wiser with advancing age	-0.50	-1.134 (0.26)	0.29	0.601 (0.55)
... are clean and neat	-0.10	-0.287 (0.78)	-0.55	-1.571 (0.12)
... prefer to work as long as they can	-0.34	-0.841 (0.40)	0.07	0.178 (0.86)
It is nice when they speak about their past	-0.37	-0.792 (0.43)	-0.40	-0.903 (0.37)
... seldom complain about the young	0.07	0.152 (0.88)	0.40	0.833 (0.41)
... are capable of new adjustment	-0.27	-0.580 (0.56)	-0.38	-0.868 (0.39)
Neighbourhoods are nice when integrated with them	-0.96	-2.408 (**0.02**)	0.14	0.284 (0.78)
... need no more love than others	0.70	1.380 (0.17)	-0.23	-0.374 (0.71)
... are different from one another	0.14	0.363 (0.72)	0.30	0.506 (0.62)
... have the same faults as the young	0.50	0.973 (0.33)	-0.20	-0.377 (0.71)
... are no different from anyone else	-0.25	-0.513 (0.61)	-0.10	-0.175 (0.86)
APPRECIATION	-0.25	-1.193 (0.24)	-0.37	-1.485 (0.14)

on society«, »interfering in the affairs of others«, that they »have annoying habits« and that »wisdom comes with age«. At the same time, students of social gerontology are significantly more appreciative towards the elderly than students of physiotherapy are regarding the statements that the elderly »should have more influence in society«, »it is nice to be in their company« and »the elderly are cheerful, good humoured and agreeable«. Students of social gerontology are appreciative and have fewer prejudices and against the elderly than students of physiotherapy do, regardless of whether they live in the same household with elderly people or not. This answers our second research question (Are there any significant differences in the attitude of social gerontology students and physiotherapy students?).

The third research question relates to student' ages. Our results showed that neither the appreciation of the elderly nor prejudices against them depend on the age of students. The only age-related difference in the attitude was that younger students are more often convinced that that elderly »complain about the young« than their older colleagues are. This may be associated with even greater attachment of older students on the family, in the third generation, or can be associated with higher awareness.

The next research question was about the attitude towards the elderly depending on student's gender. In their general attitude towards older people, students are not significantly different according to gender, although some differences between students were found: male students are, on average, slightly more appreciative towards the elderly but also have more prejudices against them. Male students more frequently perceive the elderly to be those who »complain about young people«, but the differences are not significant. Nevertheless, males are significantly more in favour of older people regarding the statement that »older people do not need any more love than most people« in comparison with female students who think the opposite.

The final research question was whether students significantly differ in the attitude towards older people, depending on whether they live in the same household with an elderly person. Students who do live in the same household with an elderly person are generally more appreciative towards the elderly; they have fewer prejudices than students who do not live with the elderly. These students have significantly less bias in and prejudices against the elderly in the items »…are untidy«, »… they are all the same« and »… cannot be changed« than students who do not live with the elderly. Therefore, living with older people has a positive impact on intergenerational understanding and respect.

Our investigation has several limitations. Results were obtained from a limited sample of physiotherapy and

social gerontology students; the investigated population was limited to students of one higher education institution. Therefore, our results cannot be generalised to a wider student population. Our suggestion for further work on the topic investigated in this article is that the attitude towards elderly in different groups dealing with the elderly should be studied, not only among health care professionals and among students. The possibility of building a comprehensive model of factors that influence attitudes towards the elderly could be considered.

6 Conclusion

Changes affect the dynamics of responses and cause dilemmas, both in society and on the individual level. This dynamic affects the attitude towards the elderly. Therefore, we focused our research attention on the issue of the attitude and awareness of attitudes towards the elderly.

As we separately studied two student groups, which are both preparing for work with older people, the results raise hopes that the attitudes of the two groups towards the elderly will be fair and respectful. The two groups perceive this marginal group predominantly positively. Since the survival of civilisation depends on the creation of space and opportunity for all, it seems important that the two groups of participants in our study perceive such a space as granted. Although minor deviations from positive attitudes were found, probably resulting from different experiences with elderly people, the results of our study raise hope that we will be able to keep a respectful relation and cooperation across age groups, despite the current deepening economic crisis.

Civilisational progress based on the link between nature and the culture of generations forces us to create a new culture of awareness and new spiritual dynamics (Ovsenik, 2015). Our research indicates that we are on this path, at least in the groups who participated in our study, and have already made the first step towards understanding and respect for older people. Despite the positive attitudes toward older people revealed in our study, more efforts are required to enhance these attitudes. Improved and new curricula are needed that may better emphasise the attitudes of students toward older people and to better prepare students for their roles as caregivers for elderly citizens.

Literature

Ayoğlu, F. N., et al. (2014). Attitudes of Turkish Nursing and Medical Students toward Elderly People. *Journal of Transcultural Nursing*, 25(3), 241-248, http://dx.doi.org/10.1177/1043659613515527

Bergman, E. J., Erickson, M. A. & Simons, J.N. (2014). Attracting and Training Tomorrow's Gerontologists: What Drives Student Interest in Aging? *Educational Gerontology*, 40(3), 172-185, http://dx.doi.org/10.1080/03601277.2013.802184

Cheong, S. K., Wong, T. Y., & Koh, G. CH. (2009). Attitudes Towards the Elderly among Singapore Medical Students, *An. Acad. Med. Singapore*, 38(1), 858-861, http://www.annals.edu.sg/pdf/38volno10oct2009/v38n10p857.pdf

Doherty, M., Mitchell, E. A., & O'Neill, S. (2011). Attitudes of Healthcare Workers towards Older People in a Rural Population: A Survey Using the Kogan Scale. *Nursing Research and Practice*, Vol. 2011, 7 pages, http://dx.doi.org/10.1155/2011/352627

Eaton, J., & Gary Donaldson, G. (2015). Altering Nursing Student and Older Adult Attitudes through a Possible Selves Ethnodrama, *Journal of Professional Nursing*, article in press, http://dx.doi.org/10.1016/j.profnurs.2015.10.005

Huang, C. S. (2013). Undergraduate Students' Knowledge about Aging and Attitudes toward Older Adults in East and West: A Socio-Economic and Cultural Exploration,

Int. J. Aging Hum. Dev., 77(1), 59-76, http://dx.doi.org/10.2190/AG.77.1.d

Kearney, N., Miller, M., Paul, J., & Smith, K. (2000). Oncology healthcare professionals' attitudes toward elderly people. *Annals of Oncology,* 11, 599-601.

Khan, N. A. (2011). Student attitudes about older adults: caring and cultural assimilation, *McNair Scholars Journal* (California State University, Sacramento), 12, 152-177, Retrieved from http://www.csus.edu/Mcnair/_ALL-Scholars-Articles-Photos-Webpage/11_2009_2010/journal_2009-10/nazia_khan_csus_mcnair_2010-11.pdf

Kiliç, D., & Adibelli, D. (2011). The validity and reliability of Kogan's attitude towards old people scale in the Turkish society. *Health*, 3(9), 602-608, http://dx.doi.org/10.4236/health.2011.39101

Kogan, N. (1961). Attitudes toward old people: The development of a scale and an examination of correlates*. The Journal of Abnormal and Social Psychology*, 62(1), 44-54, http://dx.doi.org/10.1037/h0048053

Liu Y., Norman, J., & While, A. (2012). Nurses'attitudes towards older people: A systematic review. Int. J. Nurs. Stud., 50(9), 1271-1282, http://dx.doi.org/10.1016/j.ijnurstu.2012.11.021

Liu, Z. (2014). Survey of attitude towards and understanding of the elderly amongst Chinese undergraduate medical students*, Asian Biomedicine*, 8(5), 615-622. Retrieved from http://abm.digitaljournals.org/index.php/abm/article/view/2671

Matarese, M., Lommi, M., Pedone, C., Alvaro, R., & De Marinis M. G. (2012). Nursing student attitudes towards older people: validity and reliability of the Italian version of the Kogan Attitudes towards Older People scale. *Journal of Advanced Nursing,* 69(1), 175–184, http://dx.doi.org/10.1111/j.1365-2648.2012.06055.x

Meiboom, A. A., de Vries, H., Hertogh C. M. P. M., & Scheele, F. (2015), Why medical students do not choose a career in geriatrics: a systematic review. *BMC Medical Education*, 15:101, http://dx.doi.org/10.1186/s12909-015-0384-4

Ovsenik, R., & Ovsenik, M. (2015). Intelectual capital as a challenge for intergenerational gap. In: Ovsenik, M., & Ovsenik, R., *Quo Vadis Ageing*, Maribor: Alma Mater Europaea, pp. 179-194

Schaie, K. W. & Willis, S.L. (2011). *Handbook of the Psychology of aging*, 7th ed. San Diego: Elsevier

Sheets, D. J., & Gallagher, E.M. (2012). Aging in Canada: State of the Art and Science. *The Gerontologist*, 53(1), 1-8, http://dx.doi.org/10.1093/geront/gns150

Sheikh, R. B., E Mathew, E., Rafique A. M., Suraweera R. S. C., Khan, H., & Sreedharan, J. (2013). Attitude of medical students toward old people in Ajman, United Arab Emirates, Asian *J. Gerontol. Geriatr.*, 28, 85–89. Retrieved from http://www.ajgg.org/AJGG/V8N2/2012-131-OA.pdf

Turan E., Yanardag M., & Metintas S. (2016). Attitudes of students of health sciences towards the older persons, *Nurse Educ. Today*, 36, 53-57, http://dx.doi.org/10.1016/j.nedt.2015.07.011

Ule, M. (2004) Socialna psihologija [Social Psychology], Ljubljana: FDV

Wang, C. -C., Liao, W. -C., Kao, M. -C., Chen, Y. -J., Lee, M. -C., Lee, M. -F., & Yen, C.-H. (2009). Taiwanese Medical and Nursing Student Interest Levels in and Attitudes towards Geriatrics. *Ann. Acad. Med. Singapore*, 38(3), 230-236. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/19347077

Wang, D. & Chonody, J. (2013). Social Workers' Attitudes toward Older Adults: A Review of the Literature, *Journal of Social Work Education*, 49(1), 150-172, http://dx.doi.org/10.1080/10437797.2013.755104

Diana Jeleč Kaker received her Master degree in Social science – theory of social work in 2006, and her Doctorate in social science - social work programme in 2011. She is employed in a healthcare institution and lectures the subject area of social gerontology at Alma Mater Europaea. Her research interests include gerontology, stress and professional burnout.

Marija Ovsenik received her Master degree in Organisational Sciences in 1985, and her Doctorate in social policy and social management in 1990. In 2002, she became Full Professor at the University of Ljubljana, Faculty of Social Work. She managed the TEMPUS project, which resulted in the educational programme Management in Social Work at the undergraduate and graduate levels. She has also taught at the University of Maribor and at the University of Primorska, where she was Dean of the Faculty of Tourism for four years. Currently she teaches and manages the programme Social Gerontology at Alma Mater Europaea, European Centre Maribor, and teaches at the Faculty of Organisation Studies, Novo mesto. She has published eleven books and several articles in journals indexed in SCI, Scopus, CSA, and she has mentored 31 Doctoral theses, over 80 Master theses and several hundred diploma assignments. She has participated in the preparation of several higher education curricula, 11 of which have received accreditation. She managed a Leonardo da Vinci Project and participated in international projects with the University of Goetheborg. She has given invited talks at the University of Goetheborg, Case Western Reserve in Cleveland, USA, Lyn University in Boca Raton, USA, and St. Thomas University in Miami, USA. In 2013, she obtained her second Doctorate in quality management from the Faculty of Organisational Studies in Novo mesto.

Jože Zupančič has a PhD from University of Ljubljana, Faculty of Electrical and Electronic Engineering. He is professor of information systems at University of Maribor, Faculty of Organizational Science. His primary research interests are information systems management, and user acceptance of information systems, acceptance of IT among elderly population.

Odnos študentov fizioterapije in socialne gerontologije do starejših

Ozadje in cilj. Odnos študentov do starejših ki je še posebej pomemben pri študentih in zaposlenih v socialnih in zdravstvenih poklicih. Cilj našega članka je analizirati odnos študentov socialne gerontologije in fizioterapije do starejših.
Metode. Za zbiranje podatkov smo uporabili Koganov strukturirani vprašalnik za merjenje odnosa do starejših (KAOP). Zbrane podatke smo obdelali s statističnimi metodami: test zanesljivosti, t-test za neodvisne vzorce in bivariatno korelacijsko analizo.
Rezultati. Študenti socialne gerontologije in fizioterapije sprejemajo starost ozaveščeno in s spoštovanjem. Med njimi ni zaznati s starostjo pogojenih predsodkov in stereotipov, ne problematizirajo starejših. Študenti socialne gerontologije imajo bolj pozitiven odnos do starejših kot študenti fizioterapije. Študenti moškega spola in tisti, ki živijo v skupnem gospodinjstvu s starejšim, bolje sprejemajo starejše, hkrati imajo moški študenti več predsodkov do starejših. Podobno velja za študente, ki ne živijo v skupnem gospodinjstvu s starejšim.
Zaključek. Čeprav smo ugotovili manjša odstopanja od pozitivnega odnosa do starejši, ki verjetno izhajajo iz različnih izkušenj s starejšimi, ugotovitve naše študije vzbujajo upanje, da bo mogoče tudi v prihodnje vzpostavljati spoštljiv odnos do starejših in sodelovanje med različnimi starostnimi skupinami.

Ključne besede: *odnos, starejši, študent, socialna gerontologija, fizioterapija, KAOP.*