

ATTITUDES TOWARDS OLDER PEOPLE IN CROATIAN AND SLOVENIAN NURSING STUDENTS

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SUMMARY

Background: Croatia and Slovenia are neighboring countries with marked differences in high school and undergraduate nursing curricula. The aim was to assess and compare attitudes toward the elderly among undergraduate nursing students in Croatia and Slovenia and identify factors associated with positive/negative attitudes.

Subjects and methods: This was a cross-sectional survey conducted between September, 2017 and July, 2018 among undergraduate nursing students at five higher education institutions: three in Slovenia and two in Croatia. The following data were gathered: age, sex, year of study, previous education, employment status, previous education in gerontology, desired professional role after graduating, previous experience with the elderly. Kogan's Attitude Towards Old People Scale (KATOPS) score was the primary outcome measure. Pairwise comparisons were conducted between Croatian and Slovenian students. KATOPS score was dichotomized with values above the 3rd quartile considered excellent - the dichotomized score was used as the dependent variable in a binary logistic regression model.

Results: Overall, 825 students completed the questionnaire, 85.5% were women, 417 from Slovenia, 408 from Croatia, and 80% were under 22 years of age (80%). The average score on the KATOPS was 127.4, 95% CI 126.6-128.2. Variables associated with excellent scores on the KATOPS, based on the binary regression were: studying in Slovenia (OR=2.05, 95% CI 1.39-3.03), age group 28-32 years (OR=3.9, 95% CI 1.53-9.98); previous education gerontologic nursing (OR=2.45, 95% CI 1.34-4.47), and full-time study (OR=2.12, 95% CI 1.38-3.55). Variables not associated with excellent scores were: being married (OR=0.44, 95% CI 0.22-0.92) and having previous experience in working with the elderly (OR=0.5, 95% CI 0.3-0.86).

Conclusion: Attitudes toward old age are mildly positive in Slovenian and Croatian nursing students. Slovenian students have significantly more positive attitudes toward old age and these differences are most probably due to marked differences in undergraduate nursing curricula between the two countries.

Key words: aging - attitudes - nursing

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INTRODUCTION

Positive perception of healthcare professionals positively affects the elderly in terms of their activity and involvement in all societal roles (Alamri & Xiao 2017). Previous studies have shown that, in general, nurses have positive attitudes towards the elderly; however, they have insufficient levels of knowledge on important issues in hospital settings, socioeconomic determinants of the aging process and specific care of elderly patients (Mellor et al. 2007). Quality of care for the elderly patients was shown to be associated with attitudes of healthcare providers: also, there is an association between attitudes and knowledge in the respective field (Coffey & Whitehead 2015). Educating health professionals at all levels of education could have a significant impact on change or at least modification of attitudes, if the curriculum is extended to include, apart from theoretical concepts on age and ageing, also practical and communicational skills as

important prerequisites of quality care for the elderly (Adibelli & Kılıç 2013).

So far there have been no studies to research attitudes towards old age and aging in Croatia and Slovenia, and consequently no studies to compare such results between the two countries. An analysis of the high school and higher education curricula in nursing shows that they differ between the two neighboring countries with regard to type and amount of contents on geriatric subjects (Table 1). In general, the data show that, compare to Croatia, higher education undergraduate curricula in Slovenia are more in line with the European directives on the recognition of professional qualifications (2005/36/EC and 2013/55/EU) and the Bologna declaration (European Union 2013, European Ministers in charge of Higher Education 2009).

The aim is to assess and compare attitudes towards advance age and aging in Croatian and Slovenian nursing students and investigate the impact of different factors on these attitudes.

Table 1. Comparison of nursing high school and higher education curricula in Slovenia and Croatia

Country	Slovenia			Croatia	
High school	Maribor	Novo Mesto	Ljubljana	Varaždin	Zagreb
Length of schooling	4 years	4 years	4 years	5 years	5 years
School year	3	3	3	5	5
Subject title	health care in geriatrics	health care in geriatrics	health care in geriatrics	health care of the elderly	health care of the elderly
No. of sessions	58 lectures 180 praxis		64	34 lectures 102 praxis	34 lectures 102 praxis
Higher education institution	Maribor University	Novo Mesto Faculty	Ljubljana University	University North	Health University Zagreb
Study year	1	2	1	3	3
Semester	1	4	2	5	5
Compulsory subject no. 1	Health care of the elderly with geriatrics	Health care of the elderly with gerontology and rehabilitation	Health care of the elderly and rehabilitation	Health care of the elderly	Health care of the elderly
No. Of sessions	35 lectures 20 seminars	45 lectures 15 seminars 190 clinical praxis	30 lectures 30 praxis 330 clinical praxis	30 lectures 15 seminars 45 clinical praxis	30 lectures 15 seminars 45 clinical praxis
Ects	3	9	15	4	4
Study year	1	3			
Compulsory subject no. 2	Health care in geriatrics with optional clinical qualification	/	/	/	/
No. of sessions	320 clinical praxis	/	/	/	/
Elective subject		Quality of gerontology health care	/	/	/
No. of sessions		30 lectures 15 seminars 90 clinical praxis	/	/	/
ECTS	11	5	/	/	/

ECTS – European Credit Transfer System

SUBJECTS AND METHODS

Design and setting

The study was a cross-sectional survey of attitudes on advanced among undergraduate nursing students at five higher education institutions: two in Croatia and three in Slovenia, between September, 2017 and July, 2018. Hard copies of questionnaires were administered to students in the lecture halls at their educational institutions and a researcher was present during the process in order to resolve any potential ambiguities and uncertainties.

The research was approved by the respective institutional review boards and all participants signed an informed consent to participate in the study. Anonymity was ensured and all data were coded, for protection.

Data gathering

Each participant was given a booklet containing the following questionnaires: i) administrative and related data questionnaire (age, sex, year of study, previous

education, employment status, previous education in gerontology, desired professional role after graduating, previous experience with the elderly); ii) Kogan's Attitude Towards Old People Scale (KATOPS) (Kogan 1961).

The questionnaire was tested for cross-cultural adaptation on a smaller subsample of participants from English to Croatian and Slovenian.

Subjects

The sample were nursing undergraduate students from five higher education institutions: two in Croatia (University North, University Center Varaždin, Undergraduate Nursing Course and Health University Zagreb, Undergraduate Nursing Course) and three in Slovenia (Faculty of Medicine, Ljubljana University, Health Care Undergraduate Course, Novo Mesto Health Faculty, Undergraduate course, and Maribor University, Faculty of Health care, Undergraduate Course). The sample was structured so that the individual subsample sizes were weighted with regard to enrollment quotas at the respective institutions, and then further with regard to year of study.

Statistical analysis

Normality was assessed using the Kolmogorov-Smirnov test. Categorical data were summarized as absolute and relative frequencies and continuous data as means and standard deviations and as medians and interquartile ranges. Outliers were defined as values deviating more than 1.5 interquartile range. One-way analysis of variance (ANOVA) was used for multiple comparisons of means, with post hoc Bonferroni test. Proportions were compared using the χ^2 test. Internal

consistency of the KATOPS was estimated by calculating the Cronbach's α . Values >0.7 were considered satisfactory. Binary logistic regression analysis was used to assess the association between demographic and educational factors, differing geographic settings (Slovenia vs. Croatia), experience in working with the elderly and excellent scores ($\geq 3^{\text{rd}}$ quartile, or 135) on the KATOPS. Statistical significance was set at $P < 0.05$. All analyses were performed using the SPSS v24 (IBM SPSS, Armonk, NY, USA).

Table 2. Comparison between Croatian and Slovenian nursing students with regard to sociodemographic characteristics, previous gerontic education and experience

		Country						P*
		Overall		Croatia		Slovenia		
		N	%	N	%	N	%	
Sex	male	120	14.5	61	15.0	59	14.1	0.744
	female	705	85.5	347	85.0	358	85.9	
Age group (years)	18-22	660	80.0	316	77.5	344	82.5	0.178
	23-27	91	11.0	50	12.3	41	9.8	
	28-33	34	4.1	22	5.4	12	2.9	
	>33	40	4.8	20	4.9	20	4.8	
Marital status	single	731	88.6	369	90.4	362	86.8	0.101
	married	94	11.4	39	9.6	55	13.2	
Cohabitation	alone	93	11.3	60	14.7	33	7.9	0.006
	with parents	586	71.0	283	69.4	303	72.7	
	with a partner	146	17.7	65	15.9	81	19.4	
Residency	urban	378	45.8	220	53.9	158	37.9	<0.001
	rural	447	54.2	188	46.1	259	62.1	
Year of study	1 st	259	31.4	113	27.7	146	35.0	0.090
	2 nd	313	37.9	151	37.0	162	38.8	
	3 rd	253	30.7	144	35.3	109	26.1	
Study type	full-time	570	69.1	213	52.2	357	85.6	<0.001
	part-time	255	30.9	195	47.8	60	14.4	
High school diploma	medical	614	74.4	282	69.1	332	79.6	0.002
	comprehensive	166	20.1	101	24.8	65	15.6	
	other vocational schools	45	5.5	25	6.1	20	4.8	
Employment	vocational	121	14.7	70	17.2	51	12.2	0.004
	non-vocational	48	5.8	32	7.8	16	3.8	
	unemployed	656	79.5	306	75.0	350	83.9	
Education in old age nursing	yes	698	84.6	316	77.5	382	91.6	<0.001
	no	127	15.4	92	22.5	35	8.4	
Are you satisfied with the education on aging and the elderly, so far	yes	659	79.9	298	73.0	361	86.6	<0.001
	no	166	20.1	110	27.0	56	13.4	
Do you think that there is need for additional educational old age and aging-related courses in the curriculum?	yes	629	76.2	334	81.9	295	70.7	<0.001
	no	196	23.8	74	18.1	122	29.3	
Do you have experience in cohabitancy with an elderly person (≥ 65 years)	yes	583	70.7	295	72.3	288	69.1	0.307
	no	242	29.3	113	27.7	129	30.9	
Experience in working with the elderly (≥ 65 years)	yes	690	83.6	285	69.9	405	97.1	<0.001
	no	135	16.4	123	30.1	12	2.9	
Choice of professional career after graduation	don't know	94	11.4	21	5.1	73	17.5	<0.001
	hospital	604	73.2	349	85.5	255	61.2	
	primary care	78	9.5	17	4.2	61	14.6	
	education and research	16	1.9	11	2.7	5	1.2	
	work with the elderly	33	4.0	10	2.5	23	5.5	

numbers are absolute (relative) frequencies; * χ^2 -test

RESULTS

Overall, 825 students completed the questionnaire, of which 225 (27.3%) were from the Ljubljana University, 213 (25.8%) from the Zagreb University, 195 (23.6%) from the University North, 141 (17.1%) from Novo Mesto, and 51 (6.2%) from the Maribor University. The majority were women (85.5%), and under 22 years of age (80%). Married were 11.4% of participants, and 71 % lived with the parents. More than half (54.2%) of them lived in rural setting, and there were roughly equal numbers of participants per study years. Part-time were 30.9 % of students. Roughly three quarters (74.4%) of students had medical high school background, and 79.5% were unemployed at the time of the survey. Education in the field of care for the elderly had 84.6% participants, and 79.9 % were satisfied with their education on the elderly so far. More

than three quarters (76.2%) of participants considered that it is necessary to include additional education on the problems of old age and aging into the curriculum. The majority (83.6%) of participants had previous experience of working with the elderly (Table 2).

There were no significant differences between Croatian and Slovenian students in age, sex, marital status or experience in cohabitation with the elderly. Between Croatian and Slovenian students there were significant differences in marital status ($P=0.006$), place of residence ($P<0.001$), proportion of part-time vs. full time students ($P<0.001$), students with a comprehensive high-school diploma ($P=0.002$), employment status ($P=0.004$), education in care for the elderly ($P<0.001$), experience in care for the elderly ($P<0.001$), opinion on the need for additional educational courses in old age and aging-related problems ($P<0.001$), and choice of professional career after graduation ($P<0.001$) (Table 3).

Table 3. Scores on the Kogan's Attitude Towards Old People Scale: univariate comparisons

		N	μ	SD	95% CI		
Country	Croatia	408	125.1	11.0	124.0	126.2	<0.001
	Slovenia	417	129.6	12.3	128.4	130.8	
Sex	male	120	125.2	11.1	123.2	127.3	0.032
	female	705	127.7	11.9	126.9	128.6	
Age group (years)	18-22	660	127.5	12.0	126.6	128.5	0.465
	23-27	91	126.4	11.5	123.9	128.8	
	28-33	34	129.2	10.9	125.4	133.1	
	>33	40	125.5	10.6	122.1	128.9	
Marital status	single	731	127.4	12.1	126.5	128.3	0.746
	married	94	127.0	9.9	124.9	129.0	
Cohabitation	alone	93	125.9	10.7	123.8	128.2	0.274
	with parents	586	127.8	12.3	126.8	128.8	
	with a partner	146	126.6	10.7	124.9	128.4	
Residency	urban	378	126.3	11.8	125.1	127.4	0.012
	rural	447	128.3	11.9	127.2	129.4	
Year of study	1 st	259	127.8	11.8	126.3	129.2	0.086
	2 nd	313	126.2	12.2	124.9	127.6	
	3 rd	253	128.4	11.5	126.9	129.8	
Study type	full-time	570	128.8	12.2	127.8	129.8	<0.001
	part-time	255	124.2	10.5	122.9	125.5	
High school diploma	medical	614	127.9	12.2	126.9	128.8	0.111
	comprehensive	166	126.3	11.0	124.6	127.9	
	other vocational schools	45	124.9	9.5	122.1	127.8	
Employment	vocational	121	124.6	11.1	122.6	126.6	0.005
	non-vocational	48	125.4	12.3	121.8	129.0	
	unemployed	656	128.0	11.9	127.1	129.0	
Previous education in old age nursing	yes	698	128.0	11.9	127.1	128.9	0.001
	no	127	124.1	11.2	122.1	126.0	
Experience in working with the elderly (≥ 65 years)	yes	690	127.7	12.0	126.8	128.6	0.052
	no	135	125.6	11.16	123.7	127.5	
Choice of professional career after graduation	don't know	94	128.1	10.1	126.1	130.2	0.001
	hospital	604	126.6	11.8	125.7	127.6	
	primary care	78	131.0	14.3	127.8	134.2	
	education and research	16	122.6	8.8	117.9	127.3	
	work with the elderly	33	132.5	10.3	128.8	136.2	

μ – mean; SD – standard deviation; CI – confidence interval; *ANOVA

Table 4. Results of the binary logistic regression analysis (*backward conditional stepwise*) with excellent attitudes toward old people (Kogan's score $\geq 3^{\text{rd}}$ quartile, or 135) set as dependent variable

	B	S.E.	OR	95% CI	P
Slovenia vs. Croatia	0.719	0.198	2.05	1.39-3.03	<0.001
Age group: 18-22 (ref)					0.040
23-27	0.288	0.290	1.33	0.76-2.36	0.321
28-32	1.362	0.479	3.90	1.53-9.99	0.004
>33	0.792	0.596	2.21	0.69-7.10	0.184
Married	-0.811	0.370	0.44	0.22-0.92	0.028
Full time study	0.756	0.255	2.12	1.38-3.55	0.003
Previous education in gerontic nursing	0.898	0.306	2.45	1.35-4.47	0.003
Experience in working with old people	-0.682	0.271	0.51	0.30-0.86	0.012

OR – odds ratio; CI – confidence interval

KATOPS showed acceptable internal consistency (Chronbach $\alpha=0.72$). The average score on the KATOPS was 127.4 ± 11.9 , 95% CI 126.6-128.2. Scores on the KATOPS were dichotomized so that values above the 3rd quartile (>135) considered excellent. The binary outcome was set as the dependent variable in the binary logistic regression, and predictor variables were all variables included in the univariate comparisons. After a stepwise backward analysis, 6 variables were identified as having statistical significance and were retained in the model (Table 4). Compared to Croatian nursing students, Slovenian students had an odds ratio (OR) of 2.05 (95% CI 1.39-3.03) of achieving scores ≥ 135 on the KATOPS. Other significant variables were: age group 28-32 years (ref. group <22 years) OR=3.9 (95% CI 1.53-9.98); having previous education in old age nursing OR=2.45 (95% CI 1.34-4.47); being enrolled in a full-time study course OR=2.12 (95% CI 1.38-3.55); being married OR=0.44, 95% CI 0.22-0.92; having previous experience in working with the elderly OR=0.5, 95% CI 0.3-0.86 (Table 4). The model was statistically significant ($P<0.001$); however, it explained only 8.7% of variance.

DISCUSSION

In the current study, most participants had a previous education in gerontic care and most were satisfied with the education. Regardless of the previous education and satisfaction with it, nearly three quarters of participants think that additional courses in the field should be implemented into the curriculum, which might point to a rising awareness of less than optimal education on gerontic nursing. On the other hand, the finding is highly probably due to Hawthorne effect. Education is a mechanism of proven efficacy for acquiring new approaches and positive attitudes of health professionals toward the elderly (Rodgers & Gilmour 2011, Milutinovic et al. 2015). Coffey & Whitehead performed a systematic review on the subject and showed that most published research found an association between education and knowledge towards ageing, which can in turn impact improvement of attitudes toward aging and

spark interest in working with the elderly (Coffey & Whitehead 2015). Likewise, lack of knowledge is associated with negative attitudes and with lack of gerontic education in undergraduate nursing courses.

Most of the participants in our study had an experience of working or living with elderly people. Working experience with a certain population and/or a problem usually has a positive effect on attitudes and clearing prejudice, as was shown by previous research (Ross et al. 2015). Since more than half of the subjects reported living in a rural area, or with a primary family, the high proportion of subjects having an experience of cohabitation with the elderly is expected.

When asked about future professional goals, most participants in our study opted for hospital (clinical) work and a minority for work with the elderly. Although not explicitly, the participants in this study displayed a lack of motivation for work with gerontic patients, regardless of their past experience with the elderly. If the level of motivation for working with the elderly is so low, then a highly plausible explanation for a high proportion of students expressing need for further education on the topic is that they gave socially desirable answers. A previous study showed that students who gave higher grades with regard to their working environment in a gerontic nursing home had more positive attitudes towards the elderly, yet, despite their positive attitudes, they were reluctant to work with the elderly, because of unfavorable previous experiences, which include difficulties in bonding and communication and a perception of the work as being depressive and monotonous (Henderson 2008). Among many other factors that might affect the attitudes of nursing students, important ones are stereotypes and myths about the general perception of the elderly. These individuals are often perceived as being uninteresting, non-tolerant and non-productive (Deasey 2014). Also, religious and cultural factors play a role by moderating the upbringing, relationships with the elderly and forming of first attitudes of the young within families. A study by Koskinen et al. showed that students perceive gerontology as an unwanted profession, which causes a drop in interest for the discipline and thereby leads to negative attitudes

despite the fact that this specialization leads to future employment opportunities (Koskinen et al. 2014).

Kogan's Attitude Towards Old People Scale (KATOPS) was used to assess attitudes of nursing students, and it overall showed mild positive attitudes. The highest average grades (the most positive attitudes) were calculated for items: i) "Most old people are really no different from anybody else; they're as easy to understand as younger people"; and ii) "One of the most interesting and entertaining qualities of most old people is their accounts of their past experiences." Positive scores on these two attitudes point to underlying mature psychological mechanisms in respondents – rationalization and humor, which can be interpreted as maturity of students when dealing with problems of ageing and the elderly.

Less favorable attitudes (average score below 3.0) were reported on the following questions: i) "Most old people are constantly complaining about the behavior of the younger generation"; ii) "One seldom hears old people complaining about the behavior of the younger generation"; and iii) "Most old people get set in their ways and are unable to change."

Attitudes on intergenerational behavior, relationships between the young and the old, are expected projections of the examinees, who grow it from their personal experience, but also from collective experiences of their immediate communities. Intergenerational relationships are currently amidst a major change from traditional models of unquestionable respect towards the authority of the elderly in all aspects – family, work and community – to a modern, team-like or democratic approach, which is specific for its division of roles between the young and the elderly. The new model of a relationship with the elderly is not necessarily authoritative, but is based more on a specific contribution of an elderly person in roles which are appropriate or possible for functioning of a business or family community. Nevertheless, it seems as first glance that the examinees in our study have acquired strict traditional views on intergenerational conflicts, and less about intergenerational exchange and cooperation. It is exactly these attitudes that are starting points of any educational programs in gerontology, as they point primarily to critical points as sources of negativity and potentially even conflict.

A study by Lee reported that in general students have more positive, than negative, attitudes toward old people (Lee 2009). A study by Zambrini et al. on first year healthcare students showed that more than half of the students have positive attitudes toward the elderly (Zambrini et al. 2008). A study by Celik et al., on nursing students, showed that students have positive attitudes toward the elderly and are prone to working with them in the future, although they consider the aging process to be a negative phenomenon (Celik et al 2010). The reason for such a perception might be due to the fact that most of the elderly in the country (Turkey)

where the study was conducted live a non-active and non-productive lifestyle. Similar findings were reported by Strugala (Strugala 2016).

In univariate comparisons we found no differences in attitudes with regard to the following variables: age, marital status, residential status, study year and high school diploma (Table 3 and 4). Significant differences in attitudes toward the elderly were found between Croatian and Slovenian students: Slovenian students were more likely to have excellent scores on univariate and multivariate analysis. Also, examinees with previous gerontic nursing education have higher attitude scores. The differences between countries are thus expected, given the major qualitative and quantitative curricular differences which are shown in Table 1. Previous studies have demonstrated the association between educational programs on the attitudes toward old people (Zverev 2012). Female students in our study had significantly more positive attitudes toward old people than male students, although the difference was not statistically significant in the regression model. Similar findings were observed between rural and urban-residing students and employed and non-employed students. Students enrolled in a full-time study course had higher attitude scores than the part-time students. This might be due to the fact that part-time students are often vocationally employed and it is possible that clinical practice might be a generator of less positive, or even skeptical attitudes towards the patients (old people). Previous education in gerontic nursing was shown to be associated with higher attitude scores on both the univariate and regression analysis. Personal experience in working with the elderly was not shown to be associated with attitude scores on the univariate analysis; however, the regression analysis revealed such experience is associated with lower attitude scores. Similar was shown for marital status. Finally, regression analysis showed that being in the age group 28-32 years was associated with higher attitude scores, although the difference was not significant in the univariate analysis.

This study has two major limitations. First of them is that the cross-cultural adaptation of the primary outcome measuring instrument (Kogan's Attitude Toward Old People Scale) was not published before the initiation of this study. Therefore, we performed an ad hoc small pilot study to verify consistency and reliability of the Croatian and Slovenian versions of the instrument. The results of the analysis show that the instrument can be used in Croatian and Slovenian-speaking population; however, a formal inquiry is warranted, meeting all prescribed steps of a cross-cultural adaptation. The second limitation is due to inherent nature of the data gathering process via a questionnaire. Namely, as was evident in some of the scores, the respondents might have provided answers perceived by them as being socially desirable, rather than describing their actual attitudes.

CONCLUSION

Attitudes toward old age are mildly positive in Slovenian and Croatian nursing students alike. Slovenian students have significantly more positive attitudes toward old age and these differences are most probably due to marked differences in undergraduate nursing curricula between the two countries. As shown by multivariate analysis, other factors associated with more positive attitudes toward old age are age, full-time (vs. part-time) studying, and previous education in gerontic nursing. Factors associated with more negative attitudes are positive marital status and previous work experience with the elderly. The results demonstrate the significant impact of undergraduate and high school nursing curricula on the attitudes toward the elderly and should therefore prompt the responsible authorities and professionals to change the gerontic nursing curricula in order for them to meet the modern standards.

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Contribution of individual authors:

Jurica Veronek: design of the study, literature searches and analyses, interpretation of data, manuscript writing.

Maja Bajš Janović: design of the study, recruitment and collection of data, statistical analyses, manuscript writing.

Špiro Janović: recruitment and collection of data, statistical analyses, writing of the report.

Hrvoje Barić: literature searches and analyses, interpretation of data, writing of the report.

Joca Zorc & Zvezdana Gvozdanović: interpretation of data, statistical analyses, writing of the report.

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