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**COMPARISON OF HEALTH LITERACY OF NATIONAL
MINORITIES**

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Abstract

In modern societies literacy is very important for acquiring life skills. Health literacy is recognised as a key factor for improving health and well-being. Its development level and the awareness of its importance vary between individuals and nations. Social status, education and age greatly influence health literacy. The article first presents health literacy levels in different countries. In the second part the article presents the results of a research which was carried out on a sample composed of members of national minorities living in the Slovenian-Italian cross-border region. Based on the results the authors concluded that the members of both national minorities believe that the most important factors influencing health literacy are the knowledge and understanding of the aspects of a healthy lifestyle and the knowledge and understanding of their own role in disease prevention and health improvement. The conducted research shows that the members of the Slovenian national minority in Italy have a higher level of health literacy than the members of the Italian minority in Slovenia. Compared to the other countries that were included in the comparison, the only country with a higher level of health literacy than the members of the national minorities in the Slovenian-Italian cross-border region are the Netherlands. The level of health literacy of the members of national minorities in the Slovenian-Italian cross-border region is therefore higher than the European average.

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Keywords: Health literacy, national minorities, Slovenian-Italian cross-border region, international comparison.



1. Introduction

Health literacy increasingly ranks among the most important social factors of health. It has been recognized as a key factor in improving health and well-being and reducing health inequalities (Epidemiol, 2017). The definition of health literacy has been developed by Sørensen and colleagues (2012; 2015) and is based on knowledge and motivation about the ability to access, understand and use information in daily life in order to make decisions about healthcare, disease prevention and healthy behaviour. It is therefore seen as the ability of citizens to make decisive decisions about health in their daily lives. At home, at work, in healthcare, on the market and in politics.

Appropriate health literacy therefore enables a health-friendly environment, an effort to promote health, better healthcare with less health risks, better health status outcomes, as well as lower healthcare costs.

2. Problem Statement

In order to recognise and assess the health literacy of individuals experts have developed different standardised questionnaires. The development of these questionnaires was influenced by previously developed health literacy scales, which are aimed at recognising individuals with low health literacy.

Authors of the article specifically highlight the Test of Functional Health Literacy in Adults (TOFHLA), developed in 1995 (Parker, Baker, Williams, & Nurss, 1995), which is still considered one of the most reliable currently available methods of measuring health literacy (Mancuso, 2008). It is used to evaluate the patient's ability to read words and phrases. It consists of two parts dealing with numerical skills related to situations in the health environment. Due to comprehensiveness, the test was curtailed and re-named Short Test of Functional Health Literacy in Adults (S-TOFHLA) (Baker, Williams, Parker, Gazmararian, & Nurss, 1999). The test measures functional health literacy with good reliability and validity and is thus used to identify individuals' health literacy. In this test, individuals assess thirteen claims on the basis of a five-point assessment scale.

Bibliometric analyses carried out from 1991 to 2005 in 25 European countries showed that published research on health literacy only amounts to less than 1/3 of research published in the United States (Rudd Moeykens & Colton, 1999). The biggest number of health literacy research is published in the Netherlands and Sweden, followed by Germany, Italy, France (Kondilis, Kiriaze, Athanasoulia, & Falagas, 2008). In the assessment of literacy, the Ministry of Education found that 88% of the US population does not have the knowledge to read, understand and communicate health information. According to this study, one in three patients (35%) showed "basic" or "below basic" health literacy (Department of Health and Human Services, 2008). More than 90 million adults have a low level of health literacy (Gazmararian et al., 1999; Kondilis et al., 2008; Nakayama et al., 2015). Therefore, we can conclude that this is the reason why a greater emphasis is placed on discovering and exploring this area when compared to Europe. In Australia, the situation is somewhat better, but there is still a higher level of problematic health literacy compared to Europe, i.e. 60% of adults. In Japan too, the percentage of problematic health literacy is higher compared to Europe, reaching 56.7% (Nakayama et al., 2015).

Europe definitely also faces the problem of problematic adult literacy as European Literacy Europe (HLS-EU-Q47), with the support of the European Commission, has shown that insufficient health literacy

is present in many countries across Europe (Kondilis et al., 2008). Nevertheless, given the numbers below it is noticeable that the situation is better compared to America and Australia. In 2011, the European Health Literacy Survey was conducted in eight European countries (Austria, Bulgaria, Germany, Greece, Ireland, the Netherlands, Poland and Spain). It was found that, on average, 46.3% of Europeans questioned showed poor health literacy (Sørensen et al., 2015). The sample was random, in each country including 1,000 residents over 18 years of age. The results showed that on average 11.83% of all respondents showed inadequate health literacy, while health literacy of 34.47% of the respondents was found to be "problematic". On the basis of the answers, almost every second participant in the research had low health literacy. The research further showed that health literacy is related to age, employment status, social status, material deprivation and education. Vulnerable groups turned out to be particularly prone to health illiteracy: 80% of uneducated or very poorly educated people, more than 75% of those who are very ill, more than 70% of those who belong to lower social classes, 60% of people over 75 years of age, over 50% of unemployed or retired persons.

Countries with lower socio-demographic and socio-economic status, e.g. Bulgaria, had a higher percentage of inadequate health literacy. Conversely, in countries with a higher socio-demographic and socio-economic status, such as the Netherlands and Ireland, there is better health literacy (inadequate health literacy in the Netherlands reached 1.6% and in Bulgaria up to 26.3%) (ibid). In Bulgaria, 62% of respondents had low health literacy, compared to 29% in the Netherlands. The same European Health Literacy Survey Questionnaire (HLS-EU-Q47) was translated and used to test health literacy in Asia (Epidemiol, 2017). The questionnaire has already been translated into ten different languages and measures personal skills in understanding health issues and difficult situations that could arise without proper health literacy (Nakayama et al., 2015).

A Slovenian study of health literacy has also shown a significant influence of independent variables such as social status, education and age on the development of health literacy. (Štemberger Kolnik, & Babnik, 2014). The average self-assessment of respondents was 7.61, which was evaluated as good on the rating scale from 1 to 10. The higher educated respondents assessed their health as positive more often, which can explain the unsatisfactory average grade of health literacy, as 65% of the sample was represented by people with primary and secondary education. The level of education affects people's health as the more educated are more susceptible to a healthy lifestyle and better understand the instructions for maintaining and strengthening their own health, which means that there is a significantly higher level of health literacy among higher educated people (Hozjan, Babnik, Štemberger Kolnik, & Kerkoč, 2014). A research on health literacy in Slovenia was also carried out by the Institute for a Better Life in Slovenia Viva, as part of the Health Literacy Project. The survey included 445 respondents and it showed that Slovenia is in the European average, with only 37% of respondents showing problematic health literacy (Kojić, 2013).

In Italy too, a study was conducted which showed lower results than the average value of health literacy. It ranked fourth in the list (the greatest problems with health literacy were found in Bulgaria (62.1%), Spain (58.3%) and Austria (56.4%). More than half of the Italian population (54.6%) showed problematic health literacy which is higher than the European average (46.3%). Inadequate health literacy was found for 17.3% of the population while about 37% showed problematic health literacy, which means that every third citizen has problems with reading, obtaining, understanding and processing, and use of health information. It is interesting that women are more qualified than men, while the relationship between

age and health literacy confirmed the prediction, namely people aged 65 years or older have achieved lower results than younger persons. Employment status showed that employees, trainees and pupils achieved higher levels of health literacy compared to the unemployed. Housekeepers, retired persons, inactive population, disabled persons, who mostly need the highest healthcare, achieved the lowest levels of health literacy. Also, a good financial situation and self-assessment of social status indicate the level of higher health literacy. The elderly, with lower education, have poorer orientation in the healthcare system (Palumbo, Annarummaa, Adinolfia, Musella, & Piscopo, 2015).

The research on health literacy in Germany included 2000 respondents aged 15 years and over. It has shown that good health literacy is inversely proportional to age. In respondents aged between 15 and 29, poor health literacy was found in 47.3%. Approximately the same percentage (47.2%) was also shown for the group of people aged 30-45, while 55.2% of respondents aged 46-64 years were illiterate as well as 66.4% at the age of 65 and above. In all age groups, lower health literacy was observed in people with lower functional literacy, low social status and increased frequency of visits to the doctor (Berens, Vogt, Messer, Hurrelmann, & Schaeffer, 2016).

In Ireland, too, a study was carried out, showing that on average 40% of the Irish population has low health literacy and only 21% have excellent abilities in relation to their own health (O'Connor, 2012).

On the basis of the value of England's health literacy, it was found that 42% of adult workers do not understand and do not use day-to-day health information. The percentage of poor health literacy was further elevated to 61% if numerical skills were also needed for understanding (Roberts, 2015).

The results of the research show that it is necessary to carry out further research and, above all, to raise awareness of people with content for improving health literacy. This means that it is necessary to raise awareness regardless of the country or continent. In order to improve the situation, there are promising European Parliament projects related to the promotion of health literacy by STOA (Science and Technology Options Assessment) (European Parliament, 2015). The promotion of the importance of health literacy is highlighted by various authors, such as Quaglio, et al., 2017. In particular, the authors of this article were motivated to carry out the research by the fact that from a total of 569 articles published on the matter until 2011 the first mentioned author of individual articles originated from Europe in only 15% (Quaglio, et al., 2017)

3. Research Questions

- In the research, the authors were interested in:
- What is the average value of health literacy in terms of ethnic affiliation?
- What conclusions were drawn in comparing the results obtained with the results of other health literacy research carried out in Europe and the world?

4. Purpose of the Study

The purpose of the study was to determine the level of development of health literacy factors among members of national minorities in the border region between Slovenia and Italy and to compare the results with health literacy in Europe and the world.

5. Research Methods

The basic statistical population included national minorities in the border region between Slovenia and Italy. The database of a more extensive study by Fon (2017) was used. The survey was based on a sample of 186 adult persons. The sample included members of the Slovene and Italian national minorities. Women represented the majority of the sample, 138 (74.2%), while also 48 (25.8%) men were included. Almost half of all respondents were between 31-51 years of age, as many as 89 (47.8%). The smallest sample of respondents was represented by those aged between 18 and 30, altogether 34 (18.3%) persons. Respondents with education level VII (39.2%) predominated in the sample, followed by those with level V or less, counting 54 (29.0%), while the lowest was the number of those with education level VIII, 11 (5.9%). 48 (25.8%) of the respondents achieved education level VI.

Data for self-assessment of knowledge on health issues and the level of health literacy were collected with a questionnaire derived from the measurement instrument of health literacy, "Short Test of Functional Health Literacy in Adults (STOHFLA)" (Chew, Bradley, & Boyko, 2004). On the basis of a five-point assessment scale, individuals assessed 13 claims that refer to the effectiveness of healthcare in their country of residence. The questionnaire was accessible online only to members of the Italian and Slovene national minorities in the border area, in Slovene and Italian. The authors used basic descriptive statistics to process data.

6. Findings

After examining the level of health literacy in other countries in Europe and the world, in this chapter the results of the survey involving national minorities are shown and compared with one another and with other countries.

6.1. Analysis of health literacy assessments according to nationality

The table 01 shows the assessments of health literacy factors among both national minorities.

Table 01. Comparison of members of the Slovene and Italian national minorities with regard to the health literacy factors

<i>Health Literacy Factors</i>		N	Min	Max	\bar{X}	s
I know and understand the symptoms and signs of the disease I have faced so far.	SLO*	111	2	5	3.96	0.77
	IT**	75	1	5	3.99	0.92
I know and understand the factors of a healthy lifestyle.	SLO*	111	1	5	4.41	0.69
	IT**	75	3	5	4.35	0.63
I know and understand my role in preventing illness and improving my health.	SLO*	111	1	5	4.24	0.74
	IT**	75	2	5	4.35	0.69
The instructions for taking medicines are written in a way that they can be read and understood.	SLO*	111	1	5	3.75	1.00
	IT**	75	1	5	3.83	1.20
I understand well the information leaflets on healthcare that I receive in healthcare institutions.	SLO*	111	1	5	3.98	0.86
	IT**	75	1	5	4.03	0.96
I find it difficult to understand the instructions I receive for preparing for various examinations.	SLO*	111	1	5	3.44	1.18
	IT**	75	1	5	3.55	1.15
As it is hard for me to understand the information I receive from healthcare professionals, I find it difficult to understand my health status.	SLO*	111	1	5	3.70	1.01
	IT**	75	1	5	3.64	1.19
I need to ask family members, friends, or other acquaintances to help me understand medical documentation.	SLO*	111	1	5	2.76	1.29
	IT**	75	1	5	2.73	1.32

I fully understand the instructions that accompany different prescription drugs.	SLO*	111	1	5	3.71	1.01
	IT**	75	1	5	3.72	1.20
I know in which medical institutions I can receive specific health services.	SLO*	111	1	5	3.50	0.99
	IT**	75	1	5	3.53	1.14
I do well in the health system.	SLO*	111	1	5	2.86	0.89
	IT**	75	1	5	3.00	1.26
Due to incomprehension of the instructions given by healthcare professionals, I miss the scheduled appointments for using healthcare services.	SLO*	111	1	5	4.14	0.94
	IT**	75	1	5	3.79	1.22
I have difficulty adapting to health facilities by myself.	SLO*	111	1	5	3.59	1.00
	IT**	75	1	5	3.72	1.18

* A member of the Slovenian national minority in Italy

** A member of the Italian national minority in Slovenia

There is no significant difference in assessments among members of both national minorities. They all consider the claim "I know and understand my role in preventing illness and improving my health" to be the most important (the Slovenian national minority ($\bar{X} = 4,41$; $s = 0,69$) and the Italian national minority ($\bar{X} = 4,35$; $s = 0,63$). Knowledge and understanding of own role in preventing illness and improving health were also highly evaluated (the Slovene national minority ($\bar{X} = 4.24$; $s = 0.74$) and the Italian national minority ($\bar{X} = 4.35$; $s = 0, 69$). The claim with the lowest grade was "I need to ask family members, friends, or other acquaintances to help me understand medical documentation." Both the Slovenian ($\bar{X} = 2.76$; $s = 1.29$) and the Italian ($\bar{X} = 2.73$; $s = 1.32$) national community rated it the lowest. This claim also had the largest dispersion between the answers among the Slovene ($s = 1,29$) as well as the Italian ($s = 1,32$) national minority. The problems of both national minorities are quite similar. The only information that sticks out is that the members of the Slovene national community in Italy experience more misunderstandings in communicating with health professionals, such as cases of missing or being late for a scheduled appointment for using health services ($\bar{X} = 4,14$). It is clear that they have a lot of problems with understanding the information about their state of health received from medical staff, which is especially true for members of the Slovene national community in Italy ($\bar{X} = 3.70$), but in any case this fact confirms the claim that members of the Slovene minority in Italy experience more misunderstandings in communicating with healthcare professionals, such as missing or being late for a scheduled appointment for using health services ($\bar{X} = 4.14$), which may be due to the differences in the way communication is established between healthcare professionals and individuals.

6.2. Assessment of the level of health literacy versus health literacy in Europe and the world

In this chapter (Table 02), the health literacy of members of the Slovene national minority in Italy and members of the Italian national minority in Slovenia is compared with the average overall results of health literacy obtained by other research, and especially the European Health Literacy (HLS-EU). The authors summed up the mean value for their sample based on the evaluation of statements from 1 to 5 and presented the ratio of all thirteen claims with the average result of health literacy.

Table 02. Comparison of the mean value of medical literacy with respect to ethnic affiliation

Level of medical literacy	Member of the Slovenian national community in Italy		Member of the Italian national community in Slovenia	
	F	f(%)	f	f(%)
Inadequate health literacy	2	1.8%	/	/
"Problematic" health literacy	33	29.7%	29	38.7%
Appropriate health literacy	76	68.5%	46	61.3%
Total	111	100.0%	75	100.0%

From the above table, it can be understood that the majority of members of the Slovene national community in Italy (68.5%) have adequate health literacy. These are followed by the members of the Italian national community in Slovenia (61.3%), and further by the same members with problematic health literacy (38.7%). Next are the 29.7% of members of the Slovene national community in Italy showing problematic health literacy. 1.8% of members of the Slovene national community in Italy are health illiterate, while there are no members of the Italian national minority in Slovenia showing health illiteracy. On the basis of the obtained data, the authors concluded that the members of the Slovene national minority in Italy are more health literate than is the case with the Italian national minority in Slovenia, although it is important to emphasize that no member of the Italian national minority in Slovenia was found to be inadequately health literate. According to the results, they concluded that both national minorities have a higher level of health literacy compared to the countries in which respondents live. The total of inadequate and problematic health literacy in Slovenia is 37%, 54.6% for Italy.

If the results are compared with the European average, showing 46.3% of the population with problematic health literacy and 12% with inadequate health literacy, they can be regarded as comparable to the health literacy of developed countries (such as the Netherlands which has 29% of problematic health literacy). Consequently, the health literacy of national minorities included in our survey is also higher compared to America (90%), Australia (60%) and Japan (56.7%). Compared to individual European countries, the value of problematic health literacy is higher than, for example, in Germany (47.3%), Austria (56.4%), Spain (58.3%), Bulgaria (62%), England (42%), Ireland (40%).

The high health literacy result of national minorities can also be the consequence of the availability of a sample of the population with a relatively good active status (78.5% of employees) and a predominantly higher education (39.2% completed the second Bologna level or cycle). Non-probability sampling was used, which could point to this type of structure and the predominance of working status and higher education.

7. Conclusion

Based on the research carried out, it was found that there were no major differences in the development of health literacy factors among the national minorities concerned. Both consider the most important factor to be the knowledge and understanding of healthy lifestyle factors as well as the knowledge and understanding of one's own role in preventing illness and improving health. The comparison of the results of the author's research with other studies shows high level of health literacy of the members of both national minorities. The latter were shown to also have a higher level of health literacy compared to the

country of their residence. In the light of the comparison of health literacy in certain countries and continents, such as the Netherlands, Bulgaria, Ireland, Germany, England, Japan, Australia and America, the authors herewith conclude that members of national minorities in the Slovenian-Italian border area only had lower health literacy when compared with medical literacy found in the Netherlands. The authors thus conclude that such a high health literacy is also the consequence of the structure of those involved in the study, as they had a relatively high level of education (39.2% with the completed second Bologna level or cycle) and most of them was employed (78.5%). Despite a more diversified pattern, the authors believe that the results would not differ greatly, as they managed data obtained on a non-random sample. They consider the upgrading of the research would mainly mean the inclusion of an additional question on the language the respondents used during the process of schooling. This would, to a greater extent, demonstrate the influence and the importance of having a better knowledge of the language of the country of residence on the level of the development of health literacy.

References

- Baker, D. W., Williams, M. V., Parker, R. M., Gazmararian, J. A. & Nurss, J. (1999). Development of a brief test to measure functional health literacy. *Patient education and counseling*, 38(1), 33-42.
- Berens, E.M., Vogt, D., Messer, M., Hurrelmann, K. & Schaeffer, D. (2016). Health literacy among different age groups in Germany: results of a cross-sectional survey, *BMC Public Health*, 16, 1151. Available from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5103460/>
- Chew, L. D., Bradley, K. A. & Boyko E. J. (2004). Brief questions to identify patients with inadequate health literacy. *PubMed. Family Medicine*, 36(8), 588–594.
- Department of Health and Human Services (2008). *America's Health Literacy: Why We Need Accessible Health Information*. An Issue Brief From the U.S. Available from, <https://health.gov/communication/literacy/issuebrief/>
- Epidemiol (2017). Measuring health literacy in Asia: Validation of the HLS-EU-Q47 survey tool in six Asian countries. *Journal of Epidemiology* 27(2), 80–86.
- European Parliament. (2015). *Towards Scientific Foresight in the European Parliament*. Available from, [http://www.europarl.europa.eu/RegData/etudes/IDAN/2015/527415/EPRS_IDA\(2015\)527415_RE_V1_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/IDAN/2015/527415/EPRS_IDA(2015)527415_RE_V1_EN.pdf).
- Fon, A. (2017). Zdravstvena pismenost pripadnikov narodnih manjšin v obmejnem slovensko-italijanskem prostoru [The health literacy in members of national minorities along the Slovenian-Italian border]. Koper: Univerza na Primorskem, Pedagoška fakulteta.
- Gazmarian, J. A., Baker, D., Williams, M., Parker, R., Scott, T. L., Green, D. C. (1999). Health literacy among Medicare enrollees in a managed care organization. *Journal of the American Medical Association*, 281, 545–551.
- Hozjan, D., Babnik, K., Štemberger Kolnik, T. & Kerkoč, M. (January 31, 2014). Povezanost individualnih demografskih značilnosti in zdravstvene pismenosti z zdravim življenjskim slogom [Correlation of individual demographic characteristics and health literacy with a healthy lifestyle]. In D. Hozjan, M. Zorman, S. Rutar & I. Saksida (Eds.), *Izobraževanje za 21. stoletje - ustvarjalnost v vzgoji in izobraževanje [Education for the 21st century - creativity in education]* (pp. 505-517, 590-592). Koper: Univerza na Primorskem, Znanstveno-raziskovalno središče.
- Kojić (2013). Izsledki raziskave Zdravstvena pismenost v Sloveniji. Available from, <http://www.viva.si/%C4%8Clanki-o-bolezni-drugo/10601/Izsledki-raziskave-Zdravstvena-pismenost-v-Sloveniji>.
- Kondilis, B. K., Kiriaze, I. J., Athanasoulia, A. P. & Falagas, M. E. (2008). *Mapping Health Literacy. Research in the European Union: A Bibliometric Analysis*. Available from, <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0002519>.

- Mancuso, J. M. (2008). Health literacy: A concept/dimensional analysis. *Nursing and Health Sciences*, 10(3), 248–55.
- Nakayama, K., Osaka, W., Togari, T., Ishikawa, H., Yonekura, Y., Sekido, A. & Matsumoto, M. (2015). Comprehensive health literacy in Japan is lower than in Europe: a validated Japanese-language assessment of health literacy, *BMC Public Health*, 15, p. 505.
- O'Connor, T. (2012). *Health Literacy in Ireland: Benchmarking the Present State of the Art and Examining Future Challenges and Opportunities*. Natural adult literacy agency (NALA). Retrieved 14th June, 2018 from, https://www.nala.ie/sites/default/files/publications/health_literacy_in_ireland_nala_2012.pdf
- Palumbo, R., Annarummaa, C., Adinolfi, P., Musella, M. & Piscopo, G. (2015) *The Italian Health Literacy Project: Insights from the assessment of health literacy skills in Italy*. Health Policy. Available from, <http://sci-hub.io/http://dx.doi.org/10.1016/j.healthpol.2016.08.007>
- Parker, R. M., Baker, D. W., Williams, M. V. & Nurss, J. R. (1995). The test of functional health literacy in adults: a new instrument for measuring patients' literacy skills. *Journal of General Internal Medicine*, 10(10), 537–541.
- Roberts, J. (2015). *Local action on health inequalities Improving health literacy to reduce health inequalities*. Available from, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/460710/4b_Health_Literacy-Briefing.pdf
- Rudd, R. E., Moeykens, B. A. & Colton, T. C. (1999). Health and Literacy: A Review of Medical and Public Health Literature, *National Center for the Study of Adult Learning and Literacy*, 1(5). Available from, <http://www.ncsall.net/index.html?id=522.html>
- Quaglio, G., Sørensen, K., Rübzig, P., Bertinato, L., Brand, H., Karapiperis, T., Dinca, I., Peetso, T., Kadenbach, K. & Dario, C. (2017). Accelerating the health literacy agenda in Europe. *Health Promotion International*, 32(6), 1074–1080.
- Sørensen, K., Pelikan, J. M., Röthlin, F., Ganahl, K., Slonska, Z., Doyle, G., Fullam, J., Kondilis, B., Agrafiotis, D., Uiters, E., Falcon, M., Mensing, M., Tchamov, K., Van den Broucke, S. & Brand, H. (2015). Health literacy in Europe: comparative results of the European health literacy survey (HLS-EU). *European Journal of Public Health*, 1–6. Available from, <http://dx.doi.org/10.1093/eurpub/ckv043>
- Sørensen, K., Van den Broucke, S., Fullam, J., Doyle, G., Pelikan, J., Slonska, Z. & Brand, H. (2012). Health literacy and public health: a systematic review and integration of definitions and models. *BMC public health*, 12(80). Available from <https://bmcpublichealth.biomedcentral.com/articles/10.1186/1471-2458-12-80#Aff6>
- Štemberger Kolnik, T. & Babnik, K. (June 13, 2014). Zdravstvena pismenost in zaznana kompetentnost na področju zdravja kot determinante pozitivnega vedenja povezanega z zdravjem [Health literacy and perceived competence in the field of health as a determinant of positive behavior related to health]. In B. Skela-Savič (Ed.). *7.mednarodna znanstvena konferenca Znanje, vrednote, prepričanja in dokazi za razvoj kakovostne zdravstvene obravnave: mesto in vloga zdravstvene nege* [7th International Scientific Conference Knowledge, values, beliefs and evidence in developing quality health care: the place and the role of nursing] (pp. 99-106). Jesenice: Fakulteta za zdravstvo.