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The Development of Health Literacy Factors and Their Impact on National Minorities in the Slovenian-Italian Border Region

The article presents the results of the research on development of health literacy factors among members of the Slovenian and Italian national minorities in the Slovenian-Italian border region. It included 186 respondents, who have always lived in the traditional area of their minority and have not moved beyond the state border. Through quantitative analysis, the authors established that both minorities have higher level of health literacy compared to the rest of population. Age has an important role in understanding medical documentation and information, as does education on understanding of instructions for taking medicines and maintaining health. The resulting predictor, preventing and identifying disease symptoms, suggests that members of the national minorities should be better trained in healthy lifestyle.

Keywords: health literacy, Slovenian national minority, Italian national minority, functional literacy.

Razvitost dejavnikov zdravstvene pismenosti in njihov vpliv na narodne manjšine v slovensko-italijanskem obmejnem prostoru

Prispevek predstavlja rezultate raziskave, ki je preučevala razvitost dejavnikov zdravstvene pismenosti pri pripadnikih slovenske in italijanske narodne manjšine v obmejnem slovensko-italijanskem prostoru. Raziskava je zajela 186 oseb, ki od rojstva živijo na tradicionalnem območju svoje manjšine, in se niso selili preko državne meje. Kvantitativna analiza je pokazala, da imata obe narodni manjšini višjo stopnjo zdravstvene pismenosti od preostalega prebivalstva. Starost pomembno vpliva na razumevanje zdravstvene doku-mentacije in informacij, izobrazba pa na razumevanje navodil za jemanje zdravil in ohran-janje zdravja. Dobljeni prediktor Preprečevanje in prepoznavanje znakov bolezni kaže, da bi morali pripadnike obeh manjšin bolje izobraziti na področju zdravega življenjskega sloga.

Ključne besede: zdravstvena pismenost, slovenska narodna manjšina, italijanska narodna manjšina, funkcionalna pismenost.

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1. Introduction

National minorities in the Slovene-Italian border region area are discussed and studied from a number of points of view, such as language and identity (Zorman & Zudič Antonič 2006; Čok 2000; Grgič 2017), geographical and social (Bufon 2017; Komac 2015), educational (Čok & Pertot 2010; Baloh 2011; Mezgec 2016; Bogatec 2015) political (Brezigar & Vidau 2018; Komac 2004a), legal and administrative (Vidau 2013, 2015; Benedetti 2015; Komac 2004b). The national minorities have not yet been examined from the perspective of health literacy, which was one reason to explore this area. In general, studies of national minorities in which health literacy have been examined were difficult to find among the literature.

According to the European Health Literacy project, the research carried out by Sørensen and his colleagues (2012) shows that almost half of adults have problems with inadequate health literacy. Consequently, they have problems in accessing, understanding, assessing and using information to make decisions about their health. One consequence of low health literacy is higher healthcare costs which are the result of medical errors, inadequate treatment of chronic diseases and increased risk factors for the onset of chronic diseases, all of which lead to a lower quality of life. Drawing on the above-mentioned facts, our goal is to research the level of complexity of health literacy of national minorities in the Slovenian-Italian border region.

It is common for European countries to have national minorities originating from a neighbouring country. This is particularly characteristic of Eastern Europe (Daher et al. 2016). We should stress that for part of the Slovene national minority in Italy (in the former Province of Udine), Slovenia was never a state of origin, nor was Yugoslavia.

During different periods, historical circumstances, geographic areas and realistic and non-realistic needs have changed. Because of that, the definition of national minorities has varied and been adjusted through time (Josipovič 2014). For this reason, experts have had the opinion that the creation of a single definition of a national minority remains an unresolved issue (Komac 2002; Žagar 2014). The Convention for the Protection of National Minorities of the Council of Europe (Hajos 2002) itself does not contain such a definition and leaves the member states to designate the ethnic groups treated as national minorities in their country. The Republic of Slovenia considers the indigenous Italian and Hungarian national communities in the Republic of Slovenia as national minorities. Italy has 11 ethnic-linguistic minorities, including the Slovenian national minority (Bufon 2017, 2002).

For better understanding we define both national minorities according to Sanzin (2015).

The Italian national community in Slovenia is an indigenous group of inhabitants living in the coastal region of the Republic of Slovenia for centuries. According to the Paris Peace treaty, the community has become a minority and has maintained its identity, its traditions and its cultural heritage, and continues to work actively and is organised in the social, cultural, political, sporting and media fields (Sanzin 2015, 15).

The Slovene minority in Italy is historically present in a roughly thirty-kilometre wide strip, which runs along the Italian-Slovenian border from Tarvisio to Muggia, and in the three provinces of Friuli-Venezia Giulia. Slovenians in Italy were active in the 19th century up until the tragic period of World War II, when the fascist dictatorship attempted to suppress any form of integration. After the Second World War minority activity was restored and thus preserved and developed until the present day (Sanzin 2015, 11).

Health literacy research shows that the distribution of the levels of health literacy in different countries is influenced by social status, financial situation, education or age (Hozjan et al. 2014; Sørensen et al. 2015; Palumbo et al. 2016; Berens et al. 2016). In light of these aspects, we presume that the age and the education level of respondents influence the development level of literacy, as older people have lower education levels, whereas younger people have less experience with healthcare, although they have easier access to online data, which improves their health status awareness.

2. Basic Concepts of Health Literacy

The concept of literacy has been constantly changing depending on the current needs and demands of society. UNESCO first provided a definition in 1951 (Harris & Hodges 1995). Until 1962 UNESCO modified and complemented the definition and defined literacy as the ability of individuals to gain basic knowledge and skills that allow them to participate in activities which require literacy for an efficient functioning in a group and in society, and at the same time it allows them to use these skills for their own personal and social development (Spreizer Janko 1998). In the last two decades literacy has been studied by an increasing number of researchers. The International Adult Literacy Survey (Kirsch 2001), which defines literacy as a complex skill that cannot be reasonably determined with just one standard as it consists of a range of skills needed to understand and use printed and written information in different areas of human activity. The areas in which individuals can successfully function and use basic knowledge are family, society and the working environment (Tuijnman 2001). In the narrow sense, literacy can be equated to reading and writing, i.e. alphabetic literacy (Cencič 1999). Mezgec's article (2008) is particularly relevant to our research as she analysed the functional literacy of speakers of a minority language – the Slovenian national minority in Italy. The research included only

secondary school students, but the information about imbalanced bilingualism is interesting. The author stresses that imbalanced bilingualism and diglossia, which are characteristic of the Slovenian minority in Italy, result also in an unbalanced development of functional literacy in Italian and Slovenian in those who attended schools with Slovenian as the language of instruction in Italy. It is therefore important whether members of national minorities attend schools in their native language or in the language of the country in which they live.

Health literacy, the subject of our research, derives from the term functional literacy (Nutbeam 2000).

A person is functionally literate who can engage in all those activities in which literacy is required for effective functioning of his group and community and also for enabling him to continue to use reading, writing and calculation for his own and the community's development (UNESCO 2006, 153).

Comings (2011) adds that literacy experts found that literacy teaching in developing countries was focused only on skills and that it should focus more on practice. This concern led UNESCO to underline the importance of teaching literacy as a functional knowledge and so literacy teaching which complies with this approach is called functional literacy.

If we focus only on health literacy, the subject of our research, we can conclude that in a knowledge society literacy is becoming one of the key skills and is important both for the individual and for society. Sørensen et al. (2012) mention that the concept of health literacy was first used in 1974 during a health conference where the main topics were education, health education and social policy issues which influence mass communication and the health and education systems. On that occasion health literacy was first described as health education aimed at meeting minimum standards across all school grade levels. As shown, health literacy is a relatively new concept (Mancuso 2008). In 1998 the World Health Organisation defined health literacy as a "set of cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in critical ways which promote and maintain good health" (Chew et al. 2004; Dernovšek Hafner 2010; Van Servellen 2009). Ratzan (2001) provides a different definition of health literacy, although still in a similar framework. He believes that health literacy is the level of knowledge at which individuals can obtain, process and understand basic health information and services that are necessary to make appropriate decisions in order to preserve good health. Although these definitions are relatively old, all definitions of health literacy derive from the same hypothesis, i.e. that health literacy includes the need of people to understand information which contributes to maintaining good health (ProQuest Ebook Central 2013). Health literacy consists of three key elements: the search for appropriate help within the healthcare system

(orientation), the understanding of disease symptoms (understanding disease) and the importance of following instructions (understanding instructions) (Freedman et al. 2009). New definitions (Sørensen et al. 2012) include also a fourth element of health literacy, proactivity, and the individual's responsibility for her/his own health and indirectly towards the healthcare system.

The concept of health literacy has been the subject of many studies (Cutcliffe & McKenna 2005), which allows researchers to focus on the development of the skills and capacities of the population and to monitor health and the factors which facilitate good health (Sykes et al. 2013). The expansion of programmes and studies on health literacy led to the creation of two concepts: the medical understanding of health literacy and the public health concept (Pleasant & Kurovilla 2008). The first is more individualistic and derives from the understanding of the concept of health literacy. It is defined as the individual's ability to understand, obtain and use information in the context of health literacy (Babnik et al. 2013). The public health concept is more prominent in developing countries where organisations do not aim only at improving people's health, but also offer group training on the topic. The two concepts allowed the development of the importance and the use of elements of health literacy in practice, and at the same time they facilitate research and help us determine what has already been researched and done and what still needs to be done (Speros 2006). Our research relates to the two concepts, particularly to the public health concept, as we compare differences in the development level of health literacy in relation to the respondents' age and education. The concept of health education is thus expressed with a set of disciplines which cooperate in an interdisciplinary way. Health literacy is correlated with and influenced by education, health, psychology, sociology, philosophy and anthropology. These are the main knowledge areas that contribute to the creation of this complex field (Passamai et al. 2012).

Drawing on the above-mentioned facts, the key characteristics of the concept of health literacy are the ability to read, numeracy and the ability to recognise information for successful decision-making, communication and provision of information (Mancuso 2008). The ability refers to the inherent potential of individuals, i.e. to the personal abilities and skills they gained during their education. Understanding is a complex process which is based on effective logical interaction, language and experience. Prerequisites for successful understanding are literacy and healthcare experience (Buturac et al. 2016).

Additional research should be done on this subject as health literacy is still in its development phase. This influences epistemological differences between different concepts of the construct, which influence measures aimed at the population. The basic literacy skills of the individual are not the only elements that determine health literacy. This stems particularly from the interaction which

includes the search, interpretation and use of information in a system (Passamai et al. 2012).

Based on the reviewed literature, we can conclude that the concept of health literacy is shown as a clear concept with defined attributes, which as such is important for the discipline (Sørensen et al. 2016). Nevertheless, so far, the factors which determine health literacy and at the same allow the additional development of concepts have not yet been unified and elaborated. Apart from defining the predictors and the possibility for their development in relation to the improvement of the health literacy of national minorities, the following research also provides more uniform and detailed factors that determine health literacy.

Although low health literacy impacts across the age, education and socio-economic spectrums, minority and disadvantaged groups are particularly vulnerable. The health literacy of national minorities is much less researched, which is an additional cause for our research which includes Slovenian and Italian national minorities. Different documents (U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion 2010; Kickbusch et al. 2013; Vernon et al. 2007) and research on the topic of health literacy (Rudd 2007; Sentell & Braun 2012; Chiva Giurca et al. 2018) prove that ethnic minorities have lower health literacy compared to the country in which they reside.

Members of minority groups who do not speak the language of the country where they reside as their first language are more affected by low health literacy (Health Literacy Innovations 2018). Roberts (2015b) shows that language can be a major barrier for people from certain ethnic groups. Besides language, lower socio-economic status can also impact on health literacy (U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion 2010).

Problems with language in the Slovenian-Italian border area for national minorities do not appear to lie so much in misunderstanding, but rather in preserving the language of the national minority. It is characteristic of members of both national minorities that they use the language of the majority in a given environment. This is characteristic of the Slovene national minority in Italy (Beccalli 2015). The Slovene minority in Italy is fully integrated and able to understand everything expressed in the majority (Italian) language (Benedetti 2015). How the level of health literacy of our two national minorities compared to the country in which they reside, we can see below.

3. Methodology

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The aim of the research was to determine the level of health literacy of national minorities in the Slovenian-Italian border region.

The research had two goals:

- To find out the differences in the self-evaluation of the development level of health literacy in relation to the respondents' age and education.
- To determine predictors and their influence on variables that derive from health literacy.

3.1 Instrument Measurement Characteristics

For the purpose of our research we carried out an enquiry. The questionnaire that we used for national minorities in the Slovenian-Italian border region had already been validated by Štemberger Kolnik and Babnik (2012) and used to determine the health literacy of the Slovenian population. The two researchers developed it in line with the statements included in the questionnaire Short Test of Functional Health Literacy in Adults (STOHFLA) (Chew et al. 2004). The questionnaire consisted of 13 statements about the efficiency of health prevention in the country where the respondent lives. In Italy this questionnaire has not yet been validated.

Validity: The construct validity of the set of rating scales was tested by factor analysis. The 1st factor explains 34 per cent variance, which is more than the lower limit of validity (20 per cent) (Čagran 2004), which means that the set of rating scales are valid. Reliability: The reliability of the instrument was tested with the factorisation procedure and by calculating the Cronbach's α coefficient. The factorisation identified 4 factors which together explain 64.2 per cent variance, which confirms (according to the law $r_{tt} \geq \sqrt{h2}$) that this is a reliable ($r_{tt} = 0.801$) measurement instrument. The validity is confirmed also by the value of Cronbach's α coefficient ($\alpha = 0.73$) (Ferligoj et al. 1995), which proves that the questionnaire is reliable.

Objectivity: The objectivity of the questionnaire was guaranteed by the use of closed questions and of a rating scale.

3.2 Research Sample

According to statistical data of the Republic of Slovenia, during the last census of the Slovenian population from 2002, 2258 people self-declared as Italian (SURS 2018). Our research included 75 (40.3 per cent) members of the Italian national minority aged over 18, living in the Slovenian-Italian border region. According to data from the Slovenian research institute SLORI, there are about 51,000 Slovenians living in Italy (Stranj 1999). Our research included 111 (59.7 per cent) members of the Slovenian national minority aged over 18, living in the Slovenian-Italian border region.

The research is based on a sample of 186 people over 18 who belong to a national minority in the Slovenian-Italian border region. Most participants were women, 138 (74.2 per cent), whereas 48 were men (25.8 per cent). Almost

half of respondents were aged 31–51, over 89 people in total (47.8 per cent). Respondents aged 18–30 were the smallest group, consisting of 34 people in total (18.3 per cent).

The largest number of respondents in the sample had a Master's degree under the Bologna framework or a former Bachelor's degree (39.2 per cent), followed by those with a secondary school degree or lower (54 or 29.0 per cent), whereas respondents with a doctoral degree were the smallest group (11 or 5.9 per cent). Forty-eight respondents had a bachelor's degree under the Bologna framework or a higher professional degree (25.8 per cent).

3.3 The Data Collection Process and the Data Processing Methods

The questionnaire was available online in electronic form, in Slovenian and Italian. The questionnaires were sent only to the members of the Italian and the Slovenian national minorities in the border region.

The data processing was carried out with basic descriptive statistics, the Kruskal-Wallis H Test, multiple regression, Cronbach's α coefficient (testing the instrument reliability) and factor analysis (determining categories, testing the validity and reliability of the instrument).

Based on the factor analysis new variables were determined (see Table 1). The distribution of the questionnaire statements in categories is shown in the table below.

Table 1: Distribution of health literacy factors in categories

Categories of health literacy factors 1. Preventing and identifying disease symptoms I am aware of and understand disease symptoms or signs that I have experienced. I am aware of and understand healthy lifestyle factors. I am aware of and understand my role in preventing diseases and improving health. 2. Understanding instructions for taking medicines and maintaining health The instructions for taking medicines are clear and understandable. I understand well the leaflets about maintaining health that I receive in healthcare institutions. I completely understand the instructions on prescribed medication labels. 3. Knowledge about the healthcare system I can navigate the healthcare system well. I know in which healthcare institutions I can get specialist healthcare services. I find it difficult to orientate in healthcare institutions. I am late or do not attend medical appointments because I do not understand the instructions provided by the medical staff. 4. Understanding medical documentation and information Due to difficulties in understanding information provided by the medical staff I find it difficult to understand my I ask family members or friends and other acquaintances to help me understand medical documentation. I have difficulties understanding the instructions for preparation for medical exams.

The conducted factor analysis shows that we used a different categorisation of factors of health literacy than Chew et al. (2004), Štemberger Kolnik and Babnik (2012) and Freedman et al. (2009), who divided health literacy into three categories, i.e. orientation, understanding disease and understanding instructions. The study used the same health literacy factors as Chew et al. (2004), Štemberger Kolnik and Babnik (2012) and Freedman et al. (2009).

3.4 The Level of Health Literacy in the Researched National Minorities

Before presenting the results of the common health literacy level of the two national minorities in the Slovenian-Italian region, we analyse the health literacy level of each national minority and the health literacy level of the countries where the minorities live.

There are two studies about the health literacy of Slovenians: The research on health literacy carried out by Štemberger Kolnik and Babnik (2012) and the one on health literacy in Slovenia carried out by the Viva Institute for Improving Life in Slovenia. The latter shows that Slovenia is within the European average as 37 per cent of respondents have a problematic level of literacy (Kojić 2013). The current European average of health literacy shows that 46.3 per cent of Europeans who participated in the study have a low level of health literacy (Sørensen et al. 2015; Kondilis et al. 2008). Research conducted in Italy showed that the population has lower than average health literacy levels. More than half of the Italian population (54.6 per cent) has problematic levels of health literacy. 17.3 per cent of the population demonstrated insufficient levels of health literacy, approximately 37 per cent have problematic levels of health literacy, which means that every third citizen has difficulties with reading, gaining, understanding, processing and using healthcare information (Palumbo et al. 2016).

According to the results of our research, 1.8 per cent of the members of the Slovenian national minority in Italy demonstrate insufficient levels of health literacy, while 29.7 per cent have problematic levels of health literacy. These levels are within the European average and closer to the Slovenian average. None of the members of the Italian national minority in Slovenia show insufficient levels of health literacy, although 38.7 per cent of them demonstrate problematic levels of health literacy. This means that the Slovenian national minority in Italy shows higher levels of health literacy. Based on the results, we can conclude that both national minorities have a higher level of health literacy than the general population of the country where they live. We can therefore conclude that the spoken language of the analysed national minorities does not represent an obstacle. The results are comparable to the health literacy levels of developed countries (e.g. the Netherlands, where 29 per cent of the population shows problematic levels of health literacy). The levels of problematic health literacy

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are lower than in countries such as Germany (47.3 per cent), Austria (56.4 per cent), Spain (58.3 per cent), Bulgaria (62 per cent), United Kingdom (42 per cent), Ireland (40 per cent) (Sørensen et al. 2015; Berens et al. 2016; O'Connor 2012; Roberts 2015a). A high level of health literacy among national minorities could be linked to the fact that a relatively high percentage of the people included in the sample are working (78.5 per cent of them are employed) and a high percentage of them are highly educated (39.2 per cent of them have a Master's degree under the Bologna framework). The sampling was random, which could mean that both national minorities have a similar structure of predominantly employed and highly educated people.

3.5 Analysis of the Assessment of Health Literacy by Age and Education Level

Below we provide an analysis of the differences in the assessment of the respondents by age and education level. We also analysed the data by nationality, but there were no statistically relevant differences, so we did not include this analysis in the paper. As the separate calculations for each national minority did not show different results compared to the calculations for both minorities, we decided to provide a common representation of the differences by age and education level in the Slovenian-Italian border region. The result analysis was carried out by using basic descriptive statistics and the Kruskal-Wallis H Test.

Table 2: The results of the Kruskal-Wallis H Test on the differences in assessment for the category 'Preventing and identifying disease symptoms by age'

Category	Age	N	\bar{R}	Н	P
Preventing and identifying disease symptoms	18-30	34	92.50	0.094	0.954
	31-50	89	92.71		
		63	95.16		
Understanding instructions for taking medicines and maintaining health	18-30	34	87.96	0.450	0.799
	31-50	89	94.69		
	over 51	63	94.82		
Knowledge about the healthcare system	18-30	34	93.44	0.143	0.931
	31-50	89	92.13		
	over 51	63	95.47		
Understanding medical documentation and information	18-30	34	105.00	6.755	0.034*
	31-50	89	83.03		
	over 51	63	102.09		

^{*} P is statistically significant at p < 0.05

The research carried out in Italy shows that age influences health literacy abilities as people aged 65 and over had lower results than younger people (Palumbo et al. 2016). The situation was similar in Slovenia, where older respondents had

greater difficulty in understanding the healthcare system (Štemberger Kolnik & Babnik 2014; Razlag Kolar et al. 2017).

In our study, the results of the Kruskal-Wallis test (H = 6.755, P = 0.034) show statistically important differences only for the category 'Understanding medical documentation and information'. The age of the respondent influences the assessment of this category, but not in the way identified in the studies carried out for Slovenia and Italy.

Table 3: Analysis of the assessment of health literacy by age

Category Education level		N	\bar{R}	Н	P
Preventing and identifying disease symptoms	completed secondary school or lower	54	85.26	5.125	0.163
	bachelor's or higher professional degree	48	87.32		
	Master's degree under the Bologna framework or former bachelor's degree	73	104.35		
	doctoral degree	11	88.91		
	completed secondary school or lower	54	78.25	18.612	0.000*
Understanding instructions	bachelor's or higher professional degree	48	80.84		
for taking medicines and maintaining health	Master's degree under the Bologna framework or former bachelor's degree	73	114.40		
	doctoral degree	11	84.91		
	completed secondary school or lower	54	80.61	5.962	0.113
Vnoveledge shout the	bachelor's or higher professional degree	48	94.85		
Knowledge about the healthcare system	Master's degree under the Bologna framework or former bachelor's degree	73	103.45		
	doctoral degree	11	84.86		
Understanding medical documentation and information	completed secondary school or lower	54	92.97	2.931	0.402
	bachelor's or higher professional degree	48	97.42		
	Master's degree under the Bologna framework or former bachelor's degree	73	88.02		
	doctoral degree	11	115.36		

^{*} P is statistically significant at p < 0.05

In some cases, the understanding level of certain categories of health literacy is higher in older people, although the differences are negligible. The health literacy category is most developed in respondents aged 18-30 ($\overline{R}=105.00$) and least developed in respondents aged 31-50 ($\overline{R}=83.03$). This means that respondents aged 31-50 have the most difficulties in understanding medical documentation. We should underline that the report on the research on health literacy carried out by Viva (Kojić 2013) stressed that a surprisingly high percentage of respondents belonging to the oldest age group reported that they understand their doctor well when he/she talks about their medical condition and treatment options, and moreover they can easily understand instructions for taking medicines.

Numerous international studies confirmed that the distribution of levels of health literacy is related to the education level (Sørensen et al. 2015; Palumbo et al. 2016; Berens et al. 2016). The Slovenian study on health literacy also confirmed the major influence of independent variables, such as social status, education level and age on the development of health literacy (Štemberger Kolnik & Babnik 2012). Highly educated people assessed their health as positive more frequently, which might explain the unsatisfactory average assessment of health literacy, as the 65 per cent of the respondents in the sample only completed elementary or secondary school. Education level affects health: the more educated are more likely to live a healthy lifestyle and they better understand instructions for maintaining and improving health (Hozjan et al. 2014).

In our case the Kruskal-Wallis test ($\bar{H}=18.612$, $\bar{P}=0.000$) also shows that there are statistically important differences, but only in one category – 'Understanding instructions for taking medicines and maintaining health'. The table above shows that respondents with a Master's degree under the Bologna framework or former bachelor's degree have the highest level ($\bar{R}=114.40$) of understanding instructions for taking medicines and maintaining health, whereas respondents who have a secondary school education or lower have the lowest ($\bar{R}=78.25$) level of understanding. In all other categories it is clear that the higher the education level, the higher the self-assessment of the development of a certain category.

3.6 Analysis of the Predictor of Differences in the Self-Assessment of the Single Factors of Health Literacy

In this section we analyse the variable which proved to be the main predictor in the assessment of the development level and the importance of health literacy factors. The variable in question is 'Preventing and identifying disease symptoms'. The construction of new variables was based on the previous division, i.e. the distribution of factors into categories (see Table 1). Ordinal variables produced interval variables, allowing analysis by multiple regression. The estimation of parameters of regression models was carried out by using the ENTER method, which included all selected variables and estimated all regression coefficients for all the analysed variables simultaneously. The mentioned variable proved to be an important predictor for all the other three variables.

Separate values of national minorities show no significant differences between them. The categories of Italian national minority in Slovenia were equal or slightly higher. The respondents assess the variable 'Preventing and identifying disease symptoms', which proved to be the main predictor and relates to disease symptoms, healthy lifestyle factors and the role of the respondent in preventing disease, as strong and as the most developed competence ($\overline{X} = 4.22$). Among the variables which are influenced by the predictor, the variable 'Understanding

instructions for taking medicines and maintaining health' scored the highest $(\overline{X}=3.83)$, whereas the variable 'Understanding medical documentation and information' scored the lowest $(\overline{X}=1.98)$.

Table 4: Arithmetic means and standard deviations of the predictor 'Preventing and identifying disease symptoms', and of the single competences

Variable	$\bar{X}(N1)$	$\overline{X}(N2)$	\overline{X}	S
Preventing and identifying disease symptoms		4.23	4.22	0.62
Understanding instructions for taking medicines and maintaining health		3.86	3.83	0.87
Knowledge about the healthcare system		3.51	3.52	0.78
Understanding medical documentation and information	1.98	1.98	1.98	0.37

N1 member of the Slovene national minority in Italy

N2 member of the Italian national minority in Slovenia

The construction of each variable is shown in Table 1.

Table 5: Results of the Pearson (r) coefficients and of the F-statistic for the variable 'Preventing and identifying disease symptoms', and for single factors of health literacy as predictors of differences in assessment

Independent	Preventing and identifying disease symptoms				
Dependent	Pearson correla	ation coefficient	F-statistic		
	r	2P	F	P	
Understanding instructions for taking medicines and maintaining health	0.427	0.000	41.071	0.000	
Knowledge about the healthcare system	0.359	0.000	27.173	0.000	
Understanding medical documentation and information	0.159	0.015	4.758	0.030	

The Pearson (r) coefficients in the table above show that the variable 'Preventing and identifying disease symptoms' is positively and statistically correlated with all the variables above. It has the highest correlation with the variable 'Understanding instructions for taking medicines and maintaining health' (r = 0.427, P = 0.000) and the lowest correlation with the variable 'Understanding medical documentation and information' (r = 0.159, P = 0.030).

Table 6: Coefficients of determination (the role of the predictor assessment for each variable)

Variable	Preventing and identifying disease symptoms		
	R ²		
Understanding instructions for taking medicines and maintaining health	0.182		
Knowledge about the healthcare system	0.129		
Understanding medical documentation and information	0.025		

According to the table, it appears that the power dependency of the predictor 'Preventing and identifying disease symptoms' is the highest with the category 'Understanding instructions for taking medicines and maintaining health' (F =

41.071, P = 0,000) and the lowest, but still statistically significant, with the category 'Understanding medical documentation and information' (F = 4.758, P = 0,030).

The coefficient of determination or the squared multiple coefficient of correlation shows to what extent the single regression models explain the role of the predictor 'Preventing and identifying disease symptoms' in relation to each variable. The table above shows that this predictor partially explains the assessments of the single variables. The variable with the highest proportion of explained variance (18.2 per cent) is 'Understanding instructions for taking medicines and maintaining health', followed by the variables 'Knowledge about the healthcare system' (12.9 per cent) and 'Understanding medical documentation and information' (2.5 per cent).

Table 7: Regression coefficients and t-statistic

	Regression	coefficient	t-statistic		
Variable	Non- standardised (B)	Standardised (β)	t	P	
Understanding instructions for taking medicines and maintaining health	0.569	0.427	6.409	0.000	
Knowledge about the healthcare system	0.448	0.359	5.213	0.000	
Understanding medical documentation and information	0.094	0.159	2.181	0.030	

The value B (B = 0.569) for the variable 'Understanding instructions for taking medicines and maintaining health' shows that the correlation between the variable and the predictor is positive. This predicts that the respondents who assess the development level of the variable 'Preventing and identifying disease symptoms' as high, also assess the variable 'Understanding instructions for taking medicines and maintaining health' as high (t = 6.409, P = 0.000). This applies also to the other two categories or variables (B = 0.448 for the variable 'Knowledge about the healthcare system' and B = 0.094 for the variable 'Understanding medical documentation and information').

Based on the results of the calculations, we can conclude that the respondents who assess the development level of the variable about understanding disease symptoms, aspects of a healthy lifestyle and identifying and improving health as high, also assess the development level of all other three categories as high. Based on the complete presentation of the results of multiple regression analysis, we can see that the predictor in question predicts the assessment of the category 'Understanding instructions for taking medicines and maintaining health' (β = 0.427), which includes the understanding of instructions for taking medicines and the understanding of prescriptions and leaflets, with the highest accuracy of prediction. The predictor predicts the assessment of the development level of the variable 'Understanding medical documentation and information' with the lowest accuracy of prediction (β = 0.159).

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We can conclude that in an individual with a highly developed set of factors belonging to the category 'Preventing and identifying disease symptoms', the other sets of factors of health literacy will also be highly developed. In light of the above-mentioned analysis, we can conclude that the development of factors included by the predictor has to be a priority, as it will consequently influence and lead to the development of the other categories or factors of health literacy.

4. Conclusions

After a thorough review of literature, we realised that the issue in the context of health literacy is mainly that the measurement instruments in different countries are not uniform, and that the result, i.e. the level of health literacy, depends on the factors of health literacy which are included in the research. This also influences whether there will be differences and which differences there will be between the respondents in relation to age and education. If different questionnaires were used, it is difficult to carry out a comparison between countries. The lack of uniformity of measurement instruments was highlighted also by Babnik et al. (2013). This discrepancy was confirmed by our research. Based on our research, we can conclude that both national minorities have a high level of health literacy compared to the European average. However, the results show that the Slovenian national minority in Italy has a higher level of health literacy. Thus, we can conclude that both national minorities have a higher level of health literacy than the general population of the country in which they live.

We also wanted to find out the differences in relation to education level and age. The discrepancies between different studies were most prominent in this aspect. Statistically important differences by age appear only in the category 'Understanding medical documentation and information', where young people aged up to 30 have the highest level of understanding of medical documentation and information, whereas people aged 31-50 have the lowest level of understanding. We can conclude that people aged up to 30 are better equipped in terms of information, communication and technology than people aged 31–50. Due to more frequent health problems, people aged over 50 have more experience with the healthcare system and are therefore better informed. There are statistically important differences also in relation to age, specifically in the category 'Understanding instructions for taking medicines and maintaining health'. The respondents who hold a master's degree under the Bologna framework or a former bachelor's degree, have the highest level of understanding of instructions, whereas respondents who have completed secondary school or have lower level of education have the lowest level of understanding.

In the conclusion of the study we also wanted to find out whether any of the categories can influence the development of other categories. According to the calculations, the category 'Preventing and identifying disease symptoms' 80

proved to be a predictor which influences the other three categories. It has the highest influence on the category 'Understanding instructions for taking medicines and maintaining health' and the lowest influence on the category 'Understanding medical documentation and information'. Interestingly, in both national minorities the factors of health literacy with the highest value belong to the predictor category. The least developed and important factors were those belonging to the category 'Understanding medical documentation and information', on which the predictor has the lowest influence, only 2.5 per cent.

Considering the calculations we carried out, we conclude that in the context of health literacy there is a need to educate people, particularly on the topics of identifying disease symptoms, healthy lifestyle and preventing disease, i.e. prevention. Given that the level of health literacy of both national minorities has proved to be higher, according to the country in which they reside, it is proposed that the preventive health education is organised and available for all citizens and not only for national minorities. If efforts focus on the improvement of the above-mentioned factors, we will improve the factors in the other categories, because the category mentioned above has proven to be a predictor on all other categories. Since the correlation between them was positive, we will also indirectly improve other health literacy categories if we improve the predictor state. Given the low percentage of the predictor's influence on the category 'Understanding medical documentation and information', there is a need for additional training and awareness campaigns on the topic of understanding information provided by medical staff and understanding the instructions for the preparation for different medical exams.

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Notes

We used a database which was created during a large-scale study carried out by Fon (2017).