Coll. Antropol. **48** (2024) 2: 79–86
Original scientific paper
doi:10.5671/ca.48.2.1

The Relationship Between Health Literacy and Quality of Life in Hospitalized Patients with Arterial Hypertension

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ABSTRACT

The aim is to examine health literacy and the quality of life of hospitalized patients with arterial hypertension: whether there are differences with regard to the demographic characteristics of the respondents; whether there is a connection between health literacy and the quality of life of the respondents. For the purposes of this research, a cross-sectional survey was conducted. All adult hospitalized patients at the Požega County General Hospital (OGH) in the period from July to October 2020 were included in the research. The analyzed and validated Croatian version of the functional health literacy test SAHLCA-50 was used as a research instrument. The Croatian version of the SF-36 instrument was used to examine the quality of life. Patients with arterial hypertension (AH) had an inadequate level of health literacy compared to those without AH (32 versus 40 points; Mann–Whitney U test, $p < 0.001$). The subjects without AH had a significantly better quality of life, median 45.6 (IQR 36.4 to 53.4). Domains of health in respondents with AH are significantly and positively related to health literacy.

Key words: *arterial hypertension, quality of life, health literacy*

Introduction

The first comprehensive global analysis of trends in the prevalence of arterial hypertension (AH), which presented results from 184 countries worldwide, showed that the number of people aged 30 to 79 years with AH doubled between 1990 and 2019, with most of the increase occurring in countries with low and middle income[1]. The prevalence of AH was the highest throughout Central and Eastern Europe, Central Asia, the Caribbean, South Africa and some Latin American countries[2]. The results of the research conducted in Croatia within the European Health Interview Survey (EHIS) 2014/2015 where subjects self-reported AH, showed lower results in which the average prevalence was slightly above 20% according to self-reported high blood pressure in the previous year[3]. Although literature data speak of a high prevalence of AH, there are serious reasons for concern that risk groups are underestimated and that many cases of AH are not diagnosed[4].

Numerous studies indicate that AH is one of the leading contemporary public health problems at the global level[5–8]. The results of one study show that inadequate health literacy was recorded in more than 70% of the examined patients suffering from AH, and the need to improve self-care skills was highlighted, through raising the level of health literacy and the individualized approach of health professionals in the education of hypertensive patients[9]. It has also been documented that people with a low level of functional health literacy are more likely to have poorly regulated blood pressure, therefore the assessment of health literacy is an essential component in the treatment of AH[10]. Self-assessment of health is a significant factor in evaluating the quality of life and health and is a

Received for publication February 4, 2024

frequent subject of research in the field of population health[11]. Therefore, the self-assessment of health by which respondents express their subjective view of their health status is an integral part of epidemiological and community research and is used as a common measure of health and performance of the health system[12]. Furthermore, it was observed that for a large number of people, subjective health is the dominant component of functional ability and health-related quality of life[13]. Research has shown that self-assessed health is worse in patients with AH than in normotensive individuals, and the measure of self-assessed health is an independent predictor of new-onset hypertension[14].

Materials and Methods

All adult hospitalized patients at the Požega County General Hospital (OGH) in the period from July to October 2020 were included in the research. A total of 500 subjects were included, of which 262 were diagnosed with AH. The research was carried out after the approval of the Ethics Committee of the Požega CGH. All respondents were informed about the purpose of the research and the anonymity of the data in it, and their participation was voluntary. The research was conducted in accordance with ethical principles and human rights in biomedical research.

The analyzed and validated Croatian version of the functional health literacy test SAHLCA-50[15] was used as the first research instrument. It consists of fifty cards. On each card there is written one main/key word, two terms/answers associated with it and the third offered term "I don't know". The researcher collected data by conducting testing using the SAHLCA-50 questionnaire with each respondent individually (face to face), ensuring the constant privacy and anonymity of each respondent A medically illiterate respondent is considered to be a respondent whose result is correct association of concepts with the root word was less than or equal to 42 points. The respondent's response time was not limited. The Croatian version of the SF-36 instrument was used as the second test instrument[16]. The SF-36 assesses eight health concepts: limitations in physical activities, quality of life due to health problems; limitations in social activities due to physical or emotional problems; limitations in usual activities due to physical health; body pain; general mental health (psychological distress and well-being); limitations in usual role activities due to emotional problems; vitality (energy and fatigue) and general health perceptions. Possible points range from 0 to 100 points, whereby a higher number of points in all parts of the questionnaire indicates a better quality of life related to health[17].

Categorical data are represented by absolute and relative frequencies. Differences in categorical variables were tested with the x2 test. The normality of the distribution of numerical variables was tested with the Shapiro-Wilk test. Numerical data are described by the median and the limits of the interquartile range (IQR). Differences in continuous variables between two independent groups were tested with the Mann-Whitney U test (Hodges Lehmann difference with corresponding 95% confidence interval of the difference). Differences in numerical variables for more than two independent groups were tested with the Kruskal-Wallis test (post-hoc Conover). The correlation score is shown by Spearman's correlation coefficient ρ. All p values are two-sided. The significance level was set at alpha = 0.05. For statistical analysis, the statistical program MedCalc® Statistical Software version 20.111 (MedCalc Software Ltd, Ostend, Belgium; https://www.medcalc.org; 2022) and IBM SPSS Statistics 23 (IBM Corp. Released 2015. IBM SPSS Statistics for Windows, Version 23.0.Armonk, NY: IBM Corp.

Results

Table 1 shows the results where it is evident that out of a total of 262 (52%) subjects with AH, 197 (60 %) of them were health illiterate (x2 test, p< 0.001).

Table 2 shows the results of achieved points and it is evident that patients with AH had a lower number of points in the SAHLCA-50 questionnaire (Mann-Whitney U test, p<0.001).

Table 3 shows that subjects without AH had a significantly better quality of life, median 45.6 (IQR 36.4 to 53.4) compared to those with it (Kruskal-Wallis test, p< 0.001). There were no significant differences in social functioning between subjects with or without AH, while in all other parts and domains, subjects without AH had a significantly better assessment of quality of life (Mann-Whitney U test, p<0.001).

TABLE 1

DISTRIBUTION OF RESPONDENTS ACCORDING TO HEALTH LITERACY IN RELATION TO ASSOCIATED DISEASES (N = 500)

Variable	Number (%) of respondents			p*
	Health literate	Health illiterate	In total	
AH				0.001
No	108 (62)	130 (40)	238 (48)	
Yes	65 (38)	197 (60)	262 (52)	
T2D				< 0.001
No	145 (84)	223 (68)	368 (74)	
Yes	28 (16)	104 (32)	132 (26)	
AH/T2D				< 0.001
Have both	23 (13)	87 (27)	110 (22)	
Have one	47 (27)	127 (39)	174 (35)	
Have neither	103 (60)	113 (35)	216 (43)	
In total	173 (100)	327 (100)	500 (100)	

*χ^2 test, †Fisher exact test, AH – arterial hypertension, T2D – type 2 diabetes

TABLE 2

DIFFERENCES IN SAHLCA-50 QUESTIONNAIRE SCORE REGARDING ASSOCIATED DISEASES (N = 500)

	Median (interquartile range)		p
AH			< 0.001*
No	40 (32 – 45)	† Difference= -6	
Yes	32 (22 – 41)	95% CI = –8 to – 4	
T2D			
No	39 (26 – 45)	† Difference= –4	< 0.001*
Yes	31 (22 – 41)	95% CI = –7 to –2	
AH/T2D			< 0.001‡§
Have both	31 (22 – 41)	H test = 46,47	
Have one	33 (23 – 42)	df = 2	
Have neither	41 (33 – 46)		

*Mann-Whitney U test; †Hodges-Lehmann median difference; ‡Kruskal-Wallis test (post hoc Conover) §at the p<0.05 level, there was a significant difference between those who do not have any disease vs. have both diseases; they have one disease, CI – confidence interval (eng. Confidence interval), AH – arterial hypertension, T2D – type 2 diabetes

Table 4 presents the results where men with AH, compared to women, were significantly more dissatisfied with physical functioning, perception of general health, overall physical health, overall quality of life and assessment of their health compared to the previous year.

Table 5 shows the results in which it is evident that women with AH, compared to men, were significantly more dissatisfied with all domains of physical and mental health, overall quality of life and assessment of their health compared to the previous year.

Table 6 shows the results related to health domains in subjects with AH, which show that they are significantly and positively related to health literacy, except for social functioning, which is in a negative significant relationship. In respondents who do not have AH, there was no significant association of health literacy with limitation due to physical difficulties and with bodily pain.

Discussion and Conclusion

The results of this research show that patients with AH are less health literate, and as much as 60% of patients are health illiterate. A 2016 study in Thailand reported similar results and linked a higher level of health literacy with lower systolic and diastolic blood pressure, while some studies reported the opposite after controlling for confounding factors such as age, gender, and education level, and found that there is no connection between health literacy and elevated values of systolic or diastolic pressure[18]. A large number of studies that focused on health literacy in patients with AH documented that patients with high health literacy tend to have better adherence, although there are also opposite results that record an insignificant association[19–21]. Contrary to these results, a national survey conducted in China showed that patients with one or more chronic diseases have a significantly

TABLE 3

DIFFERENCES IN THE DOMAINS AND THE TOTAL QUALITY OF LIFE SCALE (SF-36) IN RELATION TO WHETHER THEY HAVE ARTERIAL HYPERTENSION (AH) OR NOT (N = 500)

	SF-36 questionnaire	Median (interquartile range) toward AH		Difference	95% interval of reliability	P*
		No (n = 238)	Yes (n = 262)			
Body health	Physical functioning	60 (25 – 100)	25 (5 – 55)	–25	–35 to –20	< 0.001
	Limitations due to physical difficulties	0 (0 – 25)	0 (0 – 0)	0	0 to 0	0.008
	Body pain	60 (40 – 80)	50 (40 – 60)	–0	–10 to 0	0.001
	Perception of general health	62 (50 – 72)	45 (30 – 57)	–17	–20 to –15	< 0.001
Physical health – overall		46.7 (35.4 – 58.8)	31.3 (22.5 – 42.5)	–13.9	–16.8 to –11.3	< 0.001
Mental health	Vitality and energy	55 (40 – 65)	40 (30 – 55)	–10	–15 to –10	< 0.001
	Social functioning	50 (50 – 50)	50 (50 – 62.5)	0	0 to 0	0.12
	Limitations due to emotional difficulties	5 (0 – 25)	0 (0 – 8.3)	0	0 to 0	< 0.001
	Mental health	60 (48 – 72)	48 (40 – 60)	–12	–16 to –8	< 0.001
Mental health – overall		43.3 (35.9 – 50.3)	36.1 (31 – 42.4)	–6.8	–8.4 to –5.1	< 0.001
SF-36 Quality of life – overall		45.6 (36.4 – 3.4)	33 (26.8 – 41.8)	–10.6	–12.6 to –8.4	< 0.001
Health assessment. compared to last year		50 (25 – 50)	25 (0 – 50)	-25	-25 to 0	< 0.001

*Mann-Whitney U test, SF-36 questionnaire for self-assessment of health (Short Form Health Survey-36), AH – arterial hypertension

TABLE 4

DIFFERENCES IN THE DOMAINS AND TOTAL QUALITY OF LIFE SCALE (SF-36) IN RELATION TO WHETHER THEY HAVE ARTERIAL HYPERTENSION (AH) OR NOT IN THE GROUP OF MEN (N = 211)

SF-36 Qustionnaire Men		Median (interquartile range) toward AH		Difference	95% interval of reliability	p*
		No (n = 95)	Yes (n = 116)			
Body health	Physical functioning	55 (15 – 100)	30 (10 – 60)	–15	–30 to 0	0.006
	Limitations due to physical difficulties	0 (0 – 25)	0 (0 – 23.4)	0	0 to 0	0.99
	Body pain	50 (40 – 80)	50 (40 – 70)	0	–10 to 0	0.66
	Perception of general health	57 (47 – 67)	50 (35 – 60)	–7	–12 to –5	< 0.001
Body health – overall		43 (31.3 – 55.5)	33.8 (26.3 – 48)	–6.3	–11.3 to –1.9	0.007
Mental health	Vitality and energy	50 (43.8 – 60)	50 (35 – 60)	–5	–10 to 0	0.05
	Social functioning	50 (50 – 62.5)	50 (50 – 62.5)	0	0 to 0	0.88
	Limitations due to emotional difficulties	0 (0 – 25)	0 (0 – 25)	0	0 to 0	0.75
	Mental health	52 (44 – 68)	56 (44 – 64)	–4	–8 to 0	0.31
Mental health – overall		40.5 (34 – 48.3)	38.9 (33.6 – 44.4)	–2.1	–4.7 to 0.25	0.08
SF-36 Quality of life – overall		42.5 (33.6 – 50.8)	36.1 (29.1 – 46.5)	–4.4	–7.6 to –1.3	0.007
Health assessment. compared to last year		50 (25 – 50)	25 (25 – 50)	0	–25 to – 0	0.02

*Mann-Whitney U test, SF-36 questionnaire for self-assessment of health (Short Form Survey-36) AH – arterial hypertension

TABLE 5

DIFFERENCES IN THE DOMAINS AND TOTAL QUALITY OF LIFE SCALE (SF-36) IN RELATION TO WHETHER THEY HAVE ARTERIAL HYPERTENSION (AH) OR NOT IN THE GROUP OF WOMEN (N = 289)

SF-36 Questionnaire-Women		Median (interquartile range) toward AH		Difference	95% interval of reliability	p*
		No (n = 143)	Yes (n = 146)			
Body health	Physical functioning	62.5 (30 – 100)	20 (5 – 40)	–35	45 to –25	< 0.001
	Limitations due to physical difficulties	0 (0 – 25)	0 (0 – 0)	0	0 to 0	< 0.001
	Body pain	60 (40 – 80)	50 (40 – 60)	–10	–20 to –10	< 0.001
	Perception of general health	67 (50 – 82)	45 (30 – 55)	–25	–27 to –20	< 0.001
Body health – overall		49.6 (38.8 – 61.3)	27.5 (20.9 – 37.6)	–19.5	–23 to –15.8	< 0.001
Mental health	Vitality and energy	55 (40 – 65)	30 (30 – 50)	–15	–20 to –15	< 0.001
	Social functioning	50 (37.5 – 50)	50 (50 – 56.3)	0	0 to 0	0.03
	Limitations due to emotional difficulties	16.7 (0 – 25)	0 (0 – 0)	0	–8.3 to 0	< 0.001
	Mental health	64 (52 – 76)	44 (36 – 56)	–20	–24 to –16	< 0.001
Mental health – overall		44.4 (37 – 50.8)	33.6 (29 – 39.6)	–10.3	–12.4 to –8.0	< 0.001
SF-36 Quality of life – overall		48.6 (38.5 – 53.9)	30.9 (25.3 – 38.4)	–15.1	–18 to –12	< 0.001
Health assessment. compared to last year		50 (25 – 50)	25 (0 – 50)	–25	–25 to –25	< 0.001

*Mann-Whitneyev U test, SF-36 questionnaire for self-assessment of health (Short Form Health Survey-36), AH – arterial hypertension

higher probability of adequate health literacy. This can be explained by greater motivation to acquire knowledge after the diagnosis and better knowledge of health information due to frequent visits to health institutions[22]. The creation of health promotion actions should be supported by planning and distribution of the necessary resources, with a targeted reduction of the burden represented by AH in modern society, while at the same time providing effec-

TABLE 6

THE RELATIONSHIP OF HEALTH LITERACY WITH SELF-ASSESSMENT OF HEALTH IN RESPONDENTS REGARDING ARTERIAL HYPERTENSION (AH), N = 500

SF-36 questionnaire		Spearman correlation coefficient Rho (P value) of health literacy (SAHLCA-50)	
		AH	
		No (n = 238)	Yes (n = 262)
Body health	Physical functionig	0.179 (0.01)	0.314 (<0.001)
	Limitations due to physical difficulties	0.09 (0.17)	0.247 (<0.001)
	Body pain	0.087 (0.19)	0.16 (0.01)
	Perception of general health	0.417 (< 0.001)	0.293 (<0.001)
Body health– overall		0.264 (< 0.001)	0.333 (<0.001)
Mental health	Vitality and energy	0.213 (< 0.001)	0.303 (<0.001)
	Social functioning	–0.229 (< 0.001)	–0.136 (0.03)
	Limitations due to emotional difficulties	0.289 (< 0.001)	0.205 (<0.001)
	Mental health	0.384 (< 0.001)	0.238 (<0.001)
Mental health – overall		0.301 (< 0.001)	0.268 (<0.001)
SF-36 Quality of life – overall		0.306 (< 0.001)	0.330 (<0.001)
Health assessment.. compared to last year		0.194 (< 0.001)	0.144 (0.02)

SF-36 (Short Form Health Survey-36), SAHLCA-50 – (Short Assessment of Health Literacy for Croatian Adults), AH – arterial hypertension

tive management of these diseases[23]. The obtained research results imply that the lack of health literacy is a challenge for public health. It is necessary to act on the entire population in order to reduce differences in health literacy that are conditioned by various factors. Recent public health research has illustrated the importance of health literacy in dealing with the burden of disease such as chronic non-infectious diseases. In order to achieve the effect of public health interventions, it is crucial to understand, adapt and contextualize interventions aligned with the level of health literacy of the target population[24]. Health literacy is a very complex concept, therefore, in order to obtain more accurate and precise data on health literacy, it would be advisable to apply other tools that would not only evaluate the domain of reading and understanding one has read, but would also evaluate the skills of calculation, communication and searching for information important for preserving health and effective disease management. The prevalence of low health literacy is a significant problem in our society, and a multimodal approach is needed to solve it. It is necessary to invest additional efforts in raising the level of health literacy in order to reduce the social inequality in health conditioned by the concept of health literacy[25]. Patient-centered care is strongly related to patient needs and is necessary for better health outcomes, especially for those with limited health literacy. Routine assessment of health literacy is still underestimated. Assessment of health literacy and its monitoring can help health professionals identify patients who may require the use of special tools and strategies to improve communication, knowledge and awareness of their needs in order to be able to make appropriate decisions about health care and improve treatment outcomes[26].

It is known that the presence of any health problem lowers the health status of an individual, which has been confirmed by research conducted so far, and in the context of these findings, we can perceive a poor self-assessment of the health of our respondents[27,28]. Conducted research suggests that patients with various chronic disorders self-assess their health as worse in most domains compared to the healthy population. However, there may be differences in the observed domains as well as the extent of variation among certain chronic disorders[29]. Numerous studies in this area have shown that AH is associated with a worse general perception of health and is a reflection of the greater burden of the disease itself[30–32]. AH symptoms with accompanying complications significantly reduce the patient's quality of life. Effective implementation of the prescribed pharmacotherapy combined with a healthy lifestyle enables the achievement of satisfactory treatment effects, which means a better self-perception of health[33]. It is worth emphasizing that the goal of modern medicine is not only to prolong the life of a patient with a chronic disease, but also to bring the quality of his life as close as possible to the state before the disease. The obtained results of the conducted research showed that there are no

significant differences in social functioning between patients who have or do not have AH, while in all other parts and domains, patients without AH rate their health significantly better. The results of our research showed the greatest difference in the domain of physical functioning, where hypertensive patients rate this domain of health significantly worse, which is in line with the results of others research[34–36]. From the obtained results, we can conclude that AH seriously affects the functioning of patients in many segments, and assessment and improvement of the quality of life should be part of the outcome of the treatment of these patients.

In the research conducted so far, heterogeneous results have been recorded on the comparison of self-assessment of health in hypertensive and normotensive persons. The results of our study showed the greatest difference in the domain of physical functioning, where hypertensive patients rate this domain significantly worse, which is in accordance with the results of other studies[37,38]. In a systematic review conducted in China, where a total of 33 studies were included, as many as 21 studies confirmed lower results in self-reported health in the domain of physical health, while no differences in mental health were recorded between hypertensive and normotensive individuals. These data suggest the importance of maintaining normotension, which offers advantages in patient-centered outcomes, in addition to other well-established cardiovascular benefits[39]. The participants of the research conducted in China showed significantly worse self-assessment results in the physical and social areas[40]. Contrary to the results of this research, in our research the highest scores were recorded in the domain of social functioning, which is similar to the results of the research conducted in 2016 in Poland[41]. The obtained results can be understood in the context of cultural influences in which the respondents live. Our subjects give the highest marks for the pain particle, while according to the literature, pain is one of the most frequently reported symptoms in patients with cardiovascular diseases and occurs in 90% of patients[41]. However, differences in the assessment of pain according to gender were observed. Thus, men had a higher score on the pain subscale compared to women, while women faced pain problems more often than men, which shows the possible influence of gender on the perception of pain. This is consistent with research in which women more often reported a pain problem as a symptom of cardiovascular disease as general discomfort, abdominal pain, arm pain, or chest pain[42]. Our results showed that women with AH, compared to men, were significantly more dissatisfied in all domains of physical and mental health, overall quality of life and assessment of their health compared to the previous year. The obtained results are consistent with the results of other studies that showed that women usually self-assess their health worse than men, while some studies show the opposite results[43,44]. There is a significant difference between patients with AH and those patients who do not have a diagnosis recorded in the perception of health compared to last year, and this domain, along with health, was rated the lowest. The overall quality of life of our subjects with AH was rated poorly, which is indicative of the need to identify factors that will help in designing specific interventions adapted to the needs of patients. The need for blood pressure monitoring and improvement of the health domain in hypertensive patients on chronic therapy must be balanced within the context of the influence of sociodemographic variables[45]. The results of this study showed that patients who do not have AH have a significantly better self-assessment of their health compared to those who have it. A low general perception of health can be explained by the belief that health is likely to deteriorate. Awareness of the established diagnosis of AH could also have influenced a worse self-assessment of health.

Doctors, nurses and other health professionals involved in providing health care should be aware of the quality of life related to patients with hypertension. AH significantly impairs the quality of life, both physical and mental health. Comorbidity further worsens health-related quality of life among people with AH. Therefore, it is important to prevent complications and treat comorbidities of hypertension. In addition to treatment, it is necessary to include adequate patient education, increase awareness of health promotion and AH among the population. These interventions can be useful in the early diagnosis of any health problem and maintaining the patient's quality of life. To determine causal relationships, further longitudinal studies will be needed to examine the presence of associations between sociodemographic data and self-rated health among hypertensive patients and to fully interpret their clinical and public health significance[46]. In our research, health domains in respondents with AH show a significant and positive relationship with health literacy, except for social functioning, which has a negative significant relationship. Such a result can be understood as respondents with a higher level of health literacy have a higher level of independence in disease management and greater criticality, which can potentially lead to a change in aspirations for social interactions. There is a possibility that respondents in this research with inadequate health literacy do not pay the necessary attention to their health because it is difficult for them to collect, analyze and apply health information and they are prone to unhealthy behaviors, which favors a worse self-assessment of their health. Considering the long course of chronic diseases, one can think about an initiative to create and implement interventions for frequent users of health services that would be adapted to the development of their health literacy, so that efforts aimed at raising health literacy could indirectly affect their better self-assessment of health[47].

The results of this study suggest that health literacy may have an important relationship with the incidence of AH. In order to promote the effects of health promotion interventions, it is necessary to improve the level of health literacy in the entire population. In future research, it would be useful to examine the links between health literacy and health indicators and to investigate more close-

ly in larger samples and a wider area to better understand the association[48]. Globally, the quality of life or self-assessment of health is greatly influenced by the characteristics of the examined population and the size of the sample. In the context of the above, our research has shortcomings because it was conducted on a subpopulation of hospitalized patients in a limited local area, and the fact that the research was conducted during the "first wave" of the coronavirus disease 2019 pandemic. The realization that AH is a significant risk factor for the onset of the coronavirus disease 2019 infection could have contributed to the low ratings of the quality of life of the patients.

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POVEZANOST ZDRAVSTVENE PISMENOSTI I KAKVOĆE ŽIVOTA U HOSPITALIZIRANIH BOLESNIKA OBOLJELIH OD ARTERIJSKE HIPERTENZIJE

S A Ž E T A K

Cilj rada je ispitati zdravstvenu pismenost i kvalitetu života hospitaliziranih bolesnika s arterijskom hipertenzijom; ispitati postoje li razlike s obzirom na demografska obilježja ispitanika; ispitati postoji li povezanost između zdravstvene pismenosti i kvalitete života ispitanika. Za potrebe ovog istraživanja provedeno je presječno istraživanje. U istraživanje su bili uključeni svi punoljetni hospitalizirani bolesnici u Općoj županijskoj bolnici (OŽB) Požega u razdoblju od srpnja do listopada 2020. godini. Kao instrument istraživanja korištena je analizirana i potvrđena hrvatska inačica testa funkcionalne zdravstvene pismenosti SAHLCA-50. Za ispitivanje kvalitete života koristila se hrvatska inačica instrumenta SF-36. Bolesnici s arterijskom hipertenzijom (AH) imali su neadekvatnu razinu zdravstvene pismenosti u usporedbi s onima bez AH (32 prema 40 bodova; Mann–Whitney U test, $p < 0{,}001$). Značajno bolju kvalitetu života imali su ispitanici koji nemaju AH, medijana 45,6 (IQR 36,4 do 53,4). Domene zdravlja u ispitanika s AH-om u značajnoj su i pozitivnoj vezi s zdravstvenom pismenošću.