UDK 616.12-008.331.2-085:316.6
COBISS.SR-ID 33123081

ISSN 0350-2899. - Vol. 45, br. 4 (2020), str.140-144.

UTICAJ SOCIODEMOGRAFSKIH FAKTORA I DUŽINE TRAJANJA BOLESTI NA ADHERENCU PACIJENATA SA ARTERIJSKOM HIPERTENZIJOM

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Sažetak: UVOD: Svjetska zdravstvena organizacija definiše adherencu pacijenta kao spremnost da svoje ponašanje (u smislu poštovanja terapije, dijetetskog režima, životnog stila i sprovođenja dijagnostičkih procedura) prilagodi preporukama dogovorenim sa zdravstvenim radnikom. **CILJ:** Istraživanje je imalo za cilj da utvrdi uticaj sociodemografskih faktora i dužine trajanja povišenog krvnog pritiska na adherencu pacijenata sa arterijskom hipertenzijom. **METOD:** Istraživanje je obavljeno kao studija presjeka. Uzorak je činilo 170 pacijenata, 88 (51,8%) žena i 82 (48,2%) muškarca, prosječne starosti $58 \pm 7,9$ godina. Pored opšteg upitnika, u istraživanju je korištena Skala adherence u hroničnim bolestima (The Adherence in Chronic Diseases Scale). **REZULTATI:** Statistički značajno veća adherence utvrđena je kod ispitanika životne dobi 60-69 godina i učesnika u istraživanju sa arterijskom hipertenzijom u trajanju dužem od 15 godina ($p < 0,05$). Ispitanici sa završenom osnovnom školom imali su statistički značajno nižu adherencu ($p < 0,05$). Mjesto stanovanja, status zaposlenja i pol ispitanika nisu pokazali statistički značajan uticaj na adherencu ispitanika (NS). **ZAKLJUČAK:** Na adherencu ispitanika statistički značajno utiče životna dob, obrazovni status i dužina trajanja arterijske hipertenzije. Mjesto stanovanja, status zaposlenja i pol ispitanika ne pokazuju statistički značajan uticaj.

Ključne reči: Hipertenzija, pacijent, saradnja, lekar.

UVOD

Arterijska hipertenzija predstavlja jedan od vodećih uzroka smrtnosti u svijetu (5-13% globalne smrtnosti). Suboptimalna kontrola krvnog pritiska usljed loše adherence navodi se kao glavni razlog visokog mortaliteta [1,2,3].

Svjetska zdravstvena organizacija (World Health Organization - WHO) definiše adherencu pacijenta kao spremnost da svoje ponašanje (u smislu poštovanja terapije, dijetetskog režima, životnog stila i sprovođenja dijagnostičkih procedura) prilagodi dogovorenim preporukama zdravstvenog radnika [1,4,5].

S druge strane, loša adherence podrazumjeva odbijanje ili neadekvatno korištenje lijekova, neprilagođen način života ili ishrane, odbijanje ili neadekvatno sprovođenje dijagnostičkih procedura. Loša adherence može biti primarna (pacijent nije u mogućnosti da ostvari dogovorene preporuke) i sekundarna (postoji namjera da se ne poštuju dogovorene preporuke ili se one nenamjerno krše usljed demografskih, socijalnih, psiholoških ili kliničkih varijabli) [1,4,5].

Na adherencu pacijenta negativno utiču: složenost liječenja, nuspojave lijekova, neravnoteža između utvrđenih medicinskih smjernica i vlastitih uvjerenja, loša komunikacija pacijenta i ljekara, nezadovoljstvo pacijenta zdravstvenim sistemom, socijalno-ekonomski faktori, socio-demografski faktori, visoki troškovi liječenja i nedostatak medicinskog osiguranja [3]. Odustvo manifestnih simptoma u inicijalnoj fazi bolesti, mlađa životna dob i nizak stepen obrazovanja identifikovani su kao najkonstantiji etiološki faktori.

Veliki broj istraživanja ukazuje na sveprisutniju lošu adherencu pacijenata sa arterijskom hipertenzijom. Procjenjuje se da je jedna trećina pacijenata u potpunosti usaglašena sa preporučenim liječenjem, druga trećina ponekad u saglasnosti, dok treća trećina nikada nije usaglašena sa preporučenim liječenjem. Suboptimalna kontrola krvnog pritiska usljed loše adherence dovodi do 54% cerebrovaskularnih incidenata i 47% ishemijske bolesti srca. Adherence može da se procjeni na dva načina, u direktnom kontaktu s pacijentima ili uvidom u medicinsku dokumentaciju. Intervencije za poboljšanje adherence uključuju

INFLUENCE OF SOCIO-DEMOGRAPHIC FACTORS AND LENGTH OF DISEASE ON ADHERENCE OF PATIENTS WITH ARTERIAL HYPERTENSION

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Summary: **INTRODUCTION:** The World Health Organization defines patient adherence as the willingness to adapt its behavior (in terms of therapy, diet, lifestyle, and diagnostic procedures) to the recommendations agreed with the healthcare provider. **Objective:** The study aimed to determine the impact of socio-demographic factors and length of elevated blood pressure on the adherence of patients with arterial hypertension. **METHOD:** The study was performed as a cross-sectional study. The sample consisted of 170 patients, 88 (51.8%) women and 82 (48.2%) men, with a mean age of 58 ± 7.9 years. In addition to the general questionnaire, the study used the Adherence in Chronic Diseases Scale. **RESULTS:** Statistically significantly higher adherence was found in subjects aged 60-69 years and participants in the study with arterial hypertension for more than 15 years ($p < 0.05$). Subjects with completed primary school had statistically significantly lower adherence ($p < 0.05$). Place of residence, employment status and gender of the respondents did not show a statistically significant influence on the adherence of the respondents (NS). **CONCLUSION:** It uses the age, educational status and duration of arterial hypertension in the adherence of examination statistics. Place of residence, employee status and gender of respondents do not show a statistically significant impact.

Keywords. Hypertension, patient s adherence, cooperation, medical doctor.

INTRODUCTION

Arterial hypertension is one of the leading causes of death in the world (5 - 13% of global mortality). Suboptimal blood pressure control due to poor adherence is cited as the main reason for high mortality [1,2,3]. The World Health Organization (WHO) defines patient adherence as the willingness to adjust their behavior (in terms of respect for therapy, diet, lifestyle and implementation of diagnostic procedures) to the agreed recommendations of the health worker [1,4,5]. On the other hand, poor adherence implies refusal or inadequate use of medications, unadapted lifestyle or diet, refusal or inadequate implementation of diagnostic procedures. Poor adherence can be primary (the patient is unable to meet the agreed recommendations) and secondary (there is an intention not to follow the agreed recommendations or they are inadvertently violated due to demographic, social, psychological or clinical variables) [1,4,5]. Patient adherence is negatively affected by: treatment complexity, drug side effects, imbalance between established medical guidelines and own beliefs, poor patient-physician communication, patient dissatisfaction

with health system, socioeconomic factors, socio-demographic factors, high treatment costs, and lack of medical insurance [3]. The absence of manifest symptoms in the initial phase of the disease, younger age and low level of education were identified as the most constant etiological factors.

A large number of studies indicate the ubiquitous poor adherence of patients with arterial hypertension. It is estimated that one third of patients are fully compliant with the recommended treatment, another third sometimes in compliance, while a last third is never compliant with the recommended treatment. Suboptimal blood pressure control due to poor adherence leads to 54% of cerebrovascular incidents and 47% of ischemic heart disease. Adherence can be assessed in two ways, in direct contact with patients or by reviewing medical records. Interventions to improve adherence include supportive measures, reviewing drug needs, and improving communication with the patient [1,4,5,6,7,8].

OBJECTIVE

The study aimed to assess the influence of socio-demographic factors and the duration of

mjere podrške, preispitivanje potrebe za lijekovima i poboljšanje komunikacije sa pacijentom [1,4,5,6,7,8].

CILJ

Istraživanje je imalo za cilj procijeniti uticaj sociodemografskih faktora i dužine trajanja povišenog krvnog pritiska na adherencu pacijenata sa arterijskom hipertenzijom.

METOD

Istraživanje je kao studija presjeka obavljeno u periodu od sedamnaest mjeseci, od 1.2.2019. do 1.7.2020. godine. Studijski uzorak je činilo 170 osoba, heterogenih sociodemografskih i zdravstvenih karakteristika odabranih metodom slučajnog izbora. Kriterijumi za uključivanje ispitanika u istraživanje bili su: arterijska hipertenzija u trajanju od najmanje dvanaest mjeseci, uzrast između 40 i 69 godina, završena osnovna škola. Iz studije su isključene osobe: starosti iznad 69 i ispod 40 godina, sa arterijskom hipertenzijom u trajanju kraćem od dvanaest mjeseci. Podaci su prikupljeni opštim i specifičnim upitnikom. Opštim upitnikom prikupljeni su sociodemografski podaci (uzrast, pol, mjesto stanovanja, stepen obrazovanja, status zaposlenosti). Skala adherence u hroničnim bolestima (The Adherence in Chronic Diseases Scale, ACDS) razvila je grupa autora iz Poljske s

ciljem procjene adherence pacijenata sa hroničnim bolestima. Sastoji se od 7 pitanja, odnosno pet pitanja o adherenci i dva pitanja o komunikaciji ljekara i pacijenta. Na svako pitanje ispitanici imaju pet ponuđenih odgovora koji se boduju ocjenom 0-4. Ukupan skor < 21 odgovara niskoj adherenci, dok skor 21-26 govori u prilog umjerene adherence. Skor > 26 potvrđuje visoku adherencu ispitanika [9,10]. Za analizu podataka korišćene su deskriptivne statističke metode: aritmetička sredina, standardna devijacija i procenti. Za utvrđivanje statističke značajnosti korišten je χ^2 -test nezavisnosti. Nivo značajnosti je podešen na 95% interval povjerenja. Rezultati su prikazani tekstualno, tabelarno i grafički.

REZULTATI

Istraživanje je obuhvatilo 170 ispitanika. Među njima je bilo 88 (51,8%) žena i 82 (48,2%) muškaraca. Najveći broj učesnika u istraživanju bio je životne dobi 60-69 godina, 72 (42,4%) ispitanika. Prosječna starost ispitivane populacije bila je $58 \pm 7,9$ godina. U selu su živjela 84 (49,4%) učesnika u istraživanju, u gradu 86 (50,6%). Osnovnu školu je završilo 17 (10,0%) ispitanika, srednju školu 108 (63,5%). Fakultetski obrazovanih bilo je 45 (26,5%) ispitanika. U radnom odnosu je bio 81 (47,6%) anketirani, nezaposlenih 89 (52,4%) (tabela 1).

Tabela 1. Sociodemografske karakteristike učesnika u istraživanju

Karakteristike		N (%)
Pol	Muškarci	82 (48.2%)
	Žene	88 (51.8%)
Dob (godine)	40 - 49	40 (23.5%)
	50 - 59	58 (34.1%)
	60 - 69	72 (42.4%)
Mjesto stanovanja	Selo	84 (49.4%)
	Grad	86 (50.6%)
Stepen obrazovanja	Osnovna škola	17 (10.0%)
	Srednja škola	108 (63.5%)
	Fakultet	45 (26.5%)
Status zaposlenosti	Zaposleni	81 (47.6%)
	Nezaposleni	89 (52.4%)

Arterijsku hipertenziju u trajanju 1-5 godina imalo je 35 (20,6%) ispitanika, u trajanju 6-10 godina 30 (17,7%). Arterijska hipertenzija u trajanju 11-14 godina utvrđena je kod 40 (23,5%) anketiranih. Najveći broj učesnika u

istraživanju imao je arterijsku hipertenziju u trajanju preko 15 godina, njih 65 (38,2%).

Niska adherence verifikovana je kod 40 (23,5%) ispitanika, umjerena kod njih 72 (42,4%), dok je visoku adherencu imalo 58 ispitanika (34,1%). Visoka adherence je

high blood pressure on the adherence of patients with arterial hypertension.

METHOD

The research was performed as a cross-sectional study in a period of seventeen months, from 02/01/2019. to 07/01/2020. The study sample consisted of 170 individuals, heterogeneous socio-demographic and health characteristics selected by random selection. Criteria for inclusion of respondents in the study were: arterial hypertension for at least twelve months, age between 40 and 69 years, completed primary school. Excluded from the study were: people over 69 and under 40, with arterial hypertension lasting less than twelve months. Data were collected through a general and specific questionnaire. The general questionnaire collected socio-demographic data (age, gender, place of residence, level of education, employment status).

The Adherence in Chronic Diseases Scale (ACDS) was developed by a group of authors from Poland with the aim of assessing the adherence of patients with chronic diseases. It consists of 7 questions, ie five questions about adherence and two questions about doctor-patient communication. To each question,

respondents have five offered answers that are scored with a score of 0-4. The total score <21 corresponds to low adherence, while the score 21-26 speaks in favor of moderate adherence. A score > 26 confirms the high adherence of the respondents [9,10]. Descriptive statistical methods were used for data analysis: arithmetic mean, standard deviation and percentages. An χ^2 -independence test was used to determine statistical significance. The significance level is set to 95% confidence interval. The results are presented textually, tabularly and graphically.

RESULTS

The study included 170 respondents. Among them were 88 (51.8%) women and 82 (48.2%) men. The largest number of participants in the study was aged 60-69 years, 72 (42.4%) respondents. The mean age of the study population was 58 ± 7.9 years. 84 (49.4%) participants in the research lived in the village, and 86 (50.6%) in the city. 17 (10.0%) respondents completed primary school, 108 (63.5%) secondary school. There were 45 (26.5%) respondents with a university degree. 81 (47.6%) respondents were employed, 89 (52.4%) were unemployed (Table 1).

Table 1. Socio-demographic characteristics of research participants

Characteristics		N (%)
Gender	Men	82 (48.2%)
	Women	88 (51.8%)
Age (years)	40 - 49	40 (23.5%)
	50 - 59	58 (34.1%)
	60 - 69	72 (42.4%)
Living place	Village	84 (49.4%)
	City	86 (50.6%)
Level of education	Primary school	17 (10.0%)
	High school	108 (63.5%)
	College	45 (26.5%)
Employment status	Employed	81 (47.6%)
	Unemployed	89 (52.4%)

35 (20.6%) subjects had arterial hypertension for 1 - 5 years, and 30 (17.7%) for 6-10 years. Arterial hypertension lasting 11 - 14 years was found in 40 (23.5%) respondents. The largest number of participants in the study had arterial hypertension lasting over 15 years, 65 of them (38.2%). Low adherence was verified in 40

(23.5%) subjects, moderate in 72 (42.4%), while 58 subjects (34.1%) had high adherence.

High adherence was found in 22 (26.8%) men and 36 (40.9%) women. The sex of the participants in the study did not have a statistically significant effect on adherence ($p=0.06$). 2 (5.0%) subjects aged 40-49 years, 9 (15.5%) subjects aged 50-59 years and 47

utvrđena kod 22 (26,8%) muškarca i 36 (40,9%) žena. Pol učesnika u istraživanju nije statistički značajno uticao na adherencu ($p=0.06$). Visoku adherencu imala su 2 (5,0%) ispitanika starosti 40-49 godina, 9 (15,5%) ispitanika starosti 50-59 godina i 47 (65,3%) ispitanika starosti 60-69 godina. Statistički značajno viša aderenza utvrđena je kod učesnika u istraživanju životne dobi 60-69 godina ($p<0.05$). Snažna aderenza je potvrđena kod 23 (27,4%) ispitanika koji žive na selu i 35 (40,7%) ispitanika sa mjestom prebivališta u gradu. Mjesto stanovanja učesnika u istraživanju nije statistički značajno uticalo na

adherencu ($p=0.08$). Visoku adherencu imao je svega 1 (5,9%) ispitanik sa završenom osnovnom školom. Snažna aderenza utvrđena je kod 38 (35,2%) ispitanika sa završenom srednjom školom i 19 (42,2%) ispitanika sa fakultetskim obrazovanjem. Statistički značajno niža aderenza utvrđena je kod učesnika u istraživanju sa završenom osnovnom školom ($p<0.05$). Visoka aderenza je verifikovana kod 32 (39,5%) ispitanika koji su bili u radnom odnosu i 26 (29,2%) nezaposlenih ispitanika. Zaposlenost ispitanika nije statistički značajno uticala na adherencu ($p=0.09$) (tabela 2).

Tabela 2. Uticaj sociodemografskih faktora na adherencu ispitanika po Adherence in Chronic Diseases Scale index-u

Karakteristike		ACDS skor < 21**	ACDS skor 21-26 ***	ACDS skor >26 ****	p vrednost*
Pol	Muškarci	18 (22.0%)	42 (51.2%)	22 (26.8%)	NS, 0.06
	Žene	22 (25.0%)	30 (34.1%)	36 (40.9%)	
Dob (godine)	40-49	19 (47.5%)	19 (47.5%)	2 (5.0%)	p < 0.05
	50-59	19 (32.8%)	30 (51.7%)	9 (15.5%)	
	60-69	2 (2.8%)	23 (31.9%)	47 (65.3%)	
Mjesto stanovanja	Selo	23 (27.4%)	38 (45.2%)	23 (27.4%)	NS, 0.08
	Grad	17 (19.8%)	34 (39.5%)	35 (40.7%)	
Stepen obrazovanja	Osnovna škola	12 (70.6%)	4 (23.5%)	1 (5.9%)	p < 0.05
	Srednja škola	20 (18.5%)	50 (46.3%)	38 (35.2%)	
	Fakultet	8 (17.8%)	18 (40.0%)	19 (42.2%)	
Status zaposlenosti	Zaposleni	15 (18.5%)	34 (42.0%)	32 (39.5%)	NS, 0.09
	Nezaposleni	25 (28.1%)	38 (42.7%)	26 (29.2%)	

*Prema hi kvadrat testu ili Fisher-ovom testu; **Niska aderenza; ***Umjerena aderenza; ****Visoka aderenza; ACDS (Adherence in Chronic Diseases Scale) – Skala aderenza u hroničnim bolestima

Visoka aderenza je utvrđena kod 3 (8,6%) ispitanika sa arterijskom hipertenzijom u trajanju od 1-5 godina, 5 (16,7%) ispitanika sa arterijskom hipertenzijom u trajanju 6-10 godina, 6 (15,0%) ispitanika sa arterijskom hipertenzijom u trajanju 11-15 godina i 44

(67,7%) ispitanika sa arterijskom hipertenzijom u trajanju >15 godina. Statistički značajno veća aderenza utvrđena je kod učesnika u istraživanju arterijskom hipertenzijom u trajanju dužim od 15 godina ($p<0.05$) (tabela 3).

Tabela 3. Uticaj dužine trajanja arterijske hipertenzije na adherencu ispitanika po Adherence in Chronic Diseases Scale index-u

Dužina trajanja arterijske hipertenzije (godine)	ACDS skor < 21**	ACDS skor 21-26 ***	ACDS skor >26 ****	p vrednost*
1-5	20 (57.1%)	12 (34.3%)	3 (8.6%)	p < 0.05
6-10	10 (33.3%)	15 (50.0%)	5 (16.7%)	
11-15	8 (20.0%)	26 (65.0%)	6 (15.0%)	
> 15	2 (3.1%)	19 (29.2%)	44 (67.7%)	

*Prema hi kvadrat testu ili Fisher-ovom testu; **Niska aderenza; ***Umjerena aderenza; ****Visoka aderenza; ACDS (Adherence in Chronic Diseases Scale) – Skala aderenza u hroničnim bolestima.

DISKUSIJA

Visoka aderenza je detektovana kod 38,3% učesnika u istraživanju. Istraživanje grupe autora iz Etiopije utvrdilo je punu adherencu kod 31,4% ispitanika. Do sličnih

rezultata došle su studije sprovedene u Kini 21,3–35,2%, Gani i Nigeriji 33,3%, Keniji 31,8%, Palestini 36,2% i Nepalju 35,4%. Nešto značajniji procenat visoke aderenza verifikovala su istraživanja u Italiji 48,6%, Brazilu 52,9%,

(65.3%) subjects aged 60-69 years had high adherence. Statistically significantly higher adherence was found in participants in the study aged 60-69 years ($p < 0.05$). Strong adherence was confirmed in 23 (27.4%) respondents living in rural areas and 35 (40.7%) respondents residing in the city. The place of residence of the study participants did not have a statistically significant effect on adherence ($p = 0.08$). Only 1 (5.9%) respondents with completed primary school had high adherence. Strong adherence

was found in 38 (35.2%) respondents with a high school diploma and 19 (42.2%) respondents with a university degree. Statistically significantly lower adherence was found in participants in the study with completed primary school ($p < 0.05$). High adherence was verified in 32 (39.5%) employed respondents and 26 (29.2%) unemployed respondents. Respondents' employment did not have a statistically significant effect on adherence ($p = 0.09$) (Table 2).

Table 2. Influence of sociodemographic factors on the Adherence in Chronic Diseases Scale index

Characteristics		ACDS score < 21**	ACDS score 21-26***	ACDS score >26****	p value*
Gender	Men	18 (22.0%)	42 (51.2%)	22 (26.8%)	NS, 0.06
	Women	22 (25.0%)	30 (34.1%)	36 (40.9%)	
Age (years)	40-49	19 (47.5%)	19 (47.5%)	2 (5.0%)	$p < 0.05$
	50-59	19 (32.8%)	30 (51.7%)	9 (15.5%)	
	60-69	2 (2.8%)	23 (31.9%)	47 (65.3%)	
Living place	Village	23 (27.4%)	38 (45.2%)	23 (27.4%)	NS, 0.08
	City	17 (19.8%)	34 (39.5%)	35 (40.7%)	
Level of education	Primary school	12 (70.6%)	4 (23.5%)	1 (5.9%)	$p < 0.05$
	High school	20 (18.5%)	50 (46.3%)	38 (35.2%)	
	College	8 (17.8%)	18 (40.0%)	19 (42.2%)	
Employment status	Employed	15 (18.5%)	34 (42.0%)	32 (39.5%)	NS, 0.09
	Unemployed	25 (28.1%)	38 (42.7%)	26 (29.2%)	

According to hi square test or Fisher test; Low adherence; **Intermediate adherence; ****High adherence.

High adherence was found in 3 (8.6%) subjects with arterial hypertension for 1 - 5 years, 5 (16.7%) subjects with arterial hypertension for 6 - 10 years, 6 (15.0%) subjects with arterial hypertension for 11 - 15 years and

44 (67.7%) subjects with arterial hypertension for > 15 years. Statistically significantly higher adherence was found in participants in the study with arterial hypertension for more than 15 years ($p < 0.05$) (Table 3).

Table 3. Influence of duration of arterial hypertension on subjects adherence to Adherence in Chronic Diseases Scale index

Duration of arterial hypertension (years)	ACDS score < 21**	ACDS score 21-26***	ACDS score >26****	p value*
1-5	20 (57.1%)	12 (34.3%)	3 (8.6%)	$p < 0.05$
6-10	10 (33.3%)	15 (50.0%)	5 (16.7%)	
11-15	8 (20.0%)	26 (65.0%)	6 (15.0%)	
> 15	2 (3.1%)	19 (29.2%)	44 (67.7%)	

According to hi square test or Fisher test; Low adherence; **Intermediate adherence; ****High adherence.

DISCUSSION

High adherence was detected in 38.3% of study participants. A study by a group of authors from Ethiopia found full adherence in 31.4% of respondents. Similar results were obtained in studies conducted in China 21.3–35.2%, Ghana and Nigeria 33.3%, Kenya 31.8%, Palestine 36.2% and Nepal 35.4%. A slightly

more significant percentage of high adherence was verified by studies in Italy 48.6%, Brazil 52.9%, the United Arab Emirates 54.4%, the United States 57.6% and Pakistan 77.0%. A study by a group of authors from Korea verified adequate adherence in 81.7% of respondents. Differences in the availability and quality of health care are cited as a possible reason for

Ujedinjenim Arapskim Emiratima 54,4%, Sjedinjenim Američkim Državama 57,6% i Pakistanu 77,0%. Istraživanje grupe autora iz Koreje verificovalo je adekvatnu adherencu kod 81,7% ispitanika. Razlika u dostupnosti i kvalitetu zdravstvene zaštite navode se kao mogući razlog za razlike u adherenci u pomenutim istraživanjima [3,11,12]. U našem istraživanju nije zabilježeno postojanje statistički značajnog uticaja pola na adherencu ispitanika.

Značajan broj istraživanja nije identifikovao pol kao statistički značajan faktor u adherenci ispitanika, ali naglašava nešto višu adherencu kod osoba ženskog pola. Nedostatak polnih razlika u adherenci kod adolescenata objašnjava se činjenicom da roditelji preuzimaju odgovornosti za poštovanje terapijskog režima u ovoj dobnoj skupini. Bolja adherenca koja se primjećuje među mladim ženama nastaje kao posljedica ranijeg kognitivnog sazrijevanja. Potreba za socijalnom poželjnošću (želja da se ispune socijalna očekivanja) i bolja percepcija bolesti kod žena može pridonijeti uočenim razlikama [13,14]. Istraživanje je verificovalo statistički značajno veću adherencu kod osoba starosti 60 - 69 godina. Brojne studije utvrdile su starenje kao statistički značajan faktor u povećanju adherence oboljelih. Osoba srednje životne dobi često nenamjerno krše terapijski protokol usljed faktora životnog stila, socijalnih ili psiholoških varijabli. Stariji pacijenti posvećuju više vremena režimu liječenja i koriste brojna pomagala kao što su kutije za tablete i kalendar. Osim toga, osobe starije životne dobi nerijetko imaju komorbiditete i pokazuju veću zabrinutost za svoje zdravstveno stanje. Moguće nenamjerno smanjenje adherence kod osoba starosti iznad osamdeset godina javlja se kao posljedica kognitivnih i fizičkih nedostataka [1,5,15,16].

Istraživanje nije detektovalo postojanje statistički značajnog uticaja mjesta stanovanja na adherencu ispitanika. Istraživanje grupe autora iz Bangladeša utvrdilo je statistički značajno nižu adherencu kod osoba sa mjestom prebivališta u ruralnoj sredini. Loša adherenca seoskog stanovništva nastaje kao posljedica nižeg socioekonomskog statusa, slabije dostupnosti zdravstvene zaštite, nedostatka specijalističkih usluga i čestih promjena zdravstvenog osoblja [15]. Studija grupe autora iz Australije utvrdila je udaljenost veću od 10 kilometara od najbliže zdravstvene

ustanove kao nezavisni predilektivni faktor lošije adherence [17].

Istraživanje je zabilježilo postojanje statistički značajno niže adherence kod učesnika u istraživanju sa završenom osnovnom školom. Istraživanja grupe autora iz Etiopije, Pakistana, Poljske, Gane i Nigerije utvrdila su negativan uticaj nižeg stepena obrazovanja na adherencu ispitanika sa arterijskom hipertenzijom. Niska primanja, nezaposlenost, nepostojanje svijesti o komplikacijama hipertenzije i važnosti optimalne kontrole krvnog pritiska navode se kao mogući razlog [3,9,10]. Studija provedena u Gani ukazuje da nizak stepen obrazovanja može imati važnu ulogu u odluci pacijenta da antihipertenzivnu terapiju zamjeni ljekovitim biljem i duhovnim iscjeljenjem [18].

Istraživanje je zabilježilo postojanje statistički značajno više adherence kod ispitanika koji su bili u radnom odnosu. Studije grupe autora u Iranu utvrdile su statistički značajno slabljenje adherence kod nezaposlenih ispitanika sa ograničenom mogućnošću nabavke lijekova. Učesnici u istraživanju sa niskim primanjima imali su 18,5 puta veću vjerovatnoću loše adherence u odnosu na ispitanike čija su primanja bila prosječna [3,6]. Istraživanje je detektovalo statistički značajan porast adherence sa produženim trajanjem hipertenzije. Istraživanje provedeno u Kini detektovalo je dužinu trajanja hipertenzije za nezavisni predilektor kvalitetne adherence [3]. Produženo trajanje hipertenzije nerijetko prate komorbiditeti, ali i rast svijesti o važnosti optimalne kontrole krvnog pritiska. Istraživanje autora iz Etiopije utvrdilo je negativan uticaj produženog trajanja hipertenzije na adherencu oboljelih [19]. Učesnici u istraživanju sa trajanjem hipertenzije pet ili više godina imali su više od pet puta veću vjerovatnoću loše adherence u odnosu na ispitanike kod kojih je hipertenzija utvrđena prije manje od dvije godine. Sa stabilizacijom krvnog pritiska značajan broj pacijenata se smatra izliječenim. Osim toga, duga upotreba lijekova opterećuje pacijente i dovodi do neadekvatne upotrebe ili prekida antihipertenzivne terapije [3,19]. Istraživanje grupe autora iz Malezije nije utvrdilo postojanje statistički značajne povezanosti dužine trajanja hipertenzije i adherence [20]. Prema istom, problemi sa adherencom se javljaju se u prvih šest mjeseci nakon uvođenja antihipertenzivne terapije i perzistiraju do 4 godine. Po isteku navedenog

differences in adherence in the mentioned research [3,11,12]. In our study, there was no statistically significant influence of gender on the adherence of the subjects.

A significant number of studies did not identify gender as a statistically significant factor in the adherence of the respondents, but it emphasizes a slightly higher adherence in females. The lack of gender differences in adherence in adolescents is explained by the fact that parents take responsibility for adhering to the therapeutic regimen in this age group. The better adherence observed among young women arises as a consequence of earlier cognitive maturation. The need for social desirability (the desire to meet social expectations) and a better perception of the disease in women may contribute to the observed differences. [13,14]. The study verified a statistically significantly higher adherence in people aged 60-69 years. Numerous studies have identified aging as a statistically significant factor in increasing patient adherence. A middle-aged person often inadvertently violates the therapeutic protocol due to lifestyle factors, social or psychological variables. Elderly patients devote more time to the treatment regimen and use a number of aids such as tablet boxes and a calendar. In addition, older people often have comorbidities and show greater concern for their health. Possible unintentional reduction of adherence in persons over the age of eighty occurs as a consequence of cognitive and physical deficiencies [1,5,15,16].

The research did not detect the existence of a statistically significant influence of place of residence on the adherence of the respondents. A study by a group of authors from Bangladesh found statistically significantly lower adherence in people residing in rural areas. Poor adherence of the rural population occurs as a result of lower socio-economic status, poorer access to health care, lack of specialist services and frequent changes in health care staff [15]. A judge from a group of authors from Australia determined a distance of more than 10 kilometers from the nearest health facility as an independent predictive factor of poor adherence [17].

The study noted the existence of statistically significantly lower adherence in study participants with completed primary school. Studies by a group of authors from Ethiopia, Pakistan, Poland, Ghana and Nigeria have found a negative impact of lower education

on the adherence of subjects with arterial hypertension. Low income, unemployment, lack of awareness about the complications of hypertension and the importance of optimal blood pressure control are cited as possible reasons [3,9,10]. A study conducted in Ghana indicates that a low level of education may play an important role in a patient's decision to replace antihypertensive therapy with herbs and spiritual healing [18]. The study noted the existence of statistically significantly higher adherence in respondents who were employed. Studies by a group of authors in Iran found a statistically significant weakening of adherence in unemployed respondents with limited access to medicines. Participants in the low-income study were 18.5 times more likely to have poor adherence than respondents whose incomes were average [3,6]. The study detected a statistically significant increase in adherence with prolonged hypertension. A study conducted in China detected the duration of hypertension for an independent predictor of quality adherence [3]. Prolonged duration of hypertension is often accompanied by comorbidities but also an increase in awareness of the importance of optimal blood pressure control. Research by authors from Ethiopia has determined the negative impact of prolonged hypertension on the adherence of patients [19]. Participants in the study with a duration of hypertension of five or more years were more than five times more likely to have poor adherence compared to subjects in whom hypertension was diagnosed less than two years ago. With the stabilization of blood pressure, a significant number of patients are considered cured. In addition, long-term use of drugs burdens patients and leads to inadequate use or discontinuation of antihypertensive therapy [3,19]. A study by a group of authors from Malaysia did not establish a statistically significant association between the duration of hypertension and adherence [20]. According to the same, problems with adherence occur in the first six months after the introduction of antihypertensive therapy and persist for up to 4 years. At the end of this period, no statistically significant differences in therapeutic adherence were verified [20].

CONCLUSION

Adherence of the subjects was statistically significantly affected by age,

perioda ne verifikuju se statistički značajne razlike u terapijskoj adherenci [20].

ZAKLJUČAK

Na adherencu ispitanika statistički značajno utiče životna dob, obrazovni status i dužina trajanja arterijske hipertenzije. Mjesto stanovanja, status zaposlenja i pol ispitanika ne pokazuju statistički značajan uticaj.

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educational status and duration of arterial hypertension. Place of residence, employment

status and gender of respondents do not show a statistically significant impact

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