

# Perception of Arterial Hypertension and Myocardial Infarction in hypertensive and Normotensive Men and Women

---

Ljubotina, Aleksandar; Materljan, Eris; Mićović, Vladimir; Kapović, Miljenko; Štefanac-Nadarević, Vesna; Ivošević, Dejan

Source / Izvornik: *Collegium antropologicum*, 2011, 35, 147 - 153

Journal article, Published version

Rad u časopisu, Objavljena verzija rada (izdavačev PDF)

Permanent link / Trajna poveznica: <https://urn.nsk.hr/urn:nbn:hr:184:227498>

Rights / Prava: [In copyright](#) / [Zaštićeno autorskim pravom](#).

Download date / Datum preuzimanja: **2024-07-10**



Repository / Repozitorij:

[Repository of the University of Rijeka, Faculty of Medicine - FMRI Repository](#)



# Perception of Arterial Hypertension and Myocardial Infarction in Hypertensive and Normotensive Men and Women

Aleksandar Ljubotina<sup>1</sup>, Eris Materljan<sup>1</sup>, Vladimir Mićović<sup>2</sup>, Miljenko Kapović<sup>3</sup>, Vesna Štefanac-Nadarević<sup>1</sup> and Dejan Ivošević<sup>1</sup>

<sup>1</sup> University of Rijeka, School of Medicine, Department of Family Medicine, Rijeka, Croatia

<sup>2</sup> University of Rijeka, School of Medicine, Department of Environmental Health, Rijeka, Croatia

<sup>3</sup> University of Rijeka, School of Medicine, Department of Biology and Medical Genetics, Rijeka, Croatia

## ABSTRACT

*The research aims were to test perception of arterial hypertension and myocardial infarction in hypertensive and normotensive men and women as well as to test perception of arterial hypertension and myocardial infarction as predictors of blood pressure control in hypertensives. In the research 470 subjects of 4 general practices from Rijeka, Croatia participated, hypertensive group from the list of hypertensive patients without cardiovascular complications and other major chronic conditions, normotensive group from the list of patients without chronic conditions. Each group had 235 subjects, 128 men and 107 women. Perception of hypertension and myocardial infarction was measured as the result on semantic differential questionnaire. Factor analysis extracted evaluation, potency and activity factor. Blood pressure control was interpreted on the five degrees scale. Statistical significance was defined under 5% ( $p < 0.05$ ). Hypertensive subjects perceived hypertension as less negative and more active, while myocardial infarction was perceived as more potent term than by normotensives. Women perceived myocardial infarction as less negative, and less potent term than men. Both groups perceived myocardial infarction as more negative, potent and active term than hypertension. Normotensive women evaluated hypertension as more negative, and perceived myocardial infarction as less potent than other subjects. Well-controlled hypertension was correlated with a lower potency of hypertension and lower activity of myocardial infarction. Both conditions are perceived as more »male« diseases. As perception of hypertension and myocardial infarction is correlated with blood pressure regulation in hypertensives, and hypertension is major risk factor for myocardial infarction, family doctors should put additional effort in changing perception of cardiovascular diseases in their patients, especially in women.*

**Key words:** perception, hypertension, myocardial infarction, semantic differential, gender

## Introduction

Essential arterial hypertension represents one of the most important public-health risks worldwide and is regarded as one of the most common reasons for visiting family doctors. In the adult population, the prevalence of hypertension rises up to 40% and more and the level of blood pressure is indicated in modern guidelines for treating hypertension as one of the most significant cardiovascular risk factors. Recent cost – effectiveness analyses showed that optimal hypertension treatment has great public health, clinical and economic consequences<sup>1–3</sup>. Progressive burden of cardiovascular diseases in

Croatia has to be followed by appropriate scientific production<sup>4,5</sup>, with psychosocial approach as complementary to biological one in researches.

Hypertension is a chronic disease that requires a lifestyle change and a daily intake of medication. Patients' beliefs about their illness, in interaction with physicians' focus and education directly impacts patients behavior, as proposed in the Health belief model, being of great prognostic value in treating chronic diseases<sup>6,7</sup>. Health belief model is based on perceived principal constructs: susceptibility, severity, benefits and barriers, and self-ef-

ficacy. Patient compliance in hypertension is crucial for the regulation of blood pressure, and beliefs about specific medications and about hypertension are significant predictors of compliance. Information about health beliefs may be helpful for family doctors to improve compliance of hypertensive patients<sup>8</sup>. Frijling et al. found that patients at moderate to high cardiovascular risk frequently showed inadequate perceptions of their absolute risk of cardiovascular events, concluding that physicians should provide greater information about absolute risk when offering preventive therapy<sup>9</sup>. Negative outcomes which should be avoided at all costs are cerebral insult and myocardial infarction as well as heart or renal failure. A change in attitude of hypertensive subjects toward hypertension and resultant complications is an important task for general practitioners, who know psychological traits and social conditions of their patients. Knowledge about heart disease, personal constructions of cardiac illness, together with their individual belief systems predict patients secondary cardiac behavior<sup>10</sup>.

In this connection, awareness of the way in which the patient perceives hypertension and its complications is of great importance, because it helps in improving cooperation between patient and doctor; what results in better control of blood pressure.

The aim of this study is to compare the perception of arterial hypertension and myocardial infarction in hypertensive and normotensive men and women as well as to test the perception of arterial hypertension and myocardial infarction as independent predictors in regulation of arterial hypertension.

## Methods

### Subjects

Subjects for this study were selected among 6268 patients enlisted in 4 general practices in Rijeka, Croatia. There were 1877 registered patients with essential arterial hypertension, 437 of them without its major complications (myocardial infarction, heart failure, cerebral insult, renal failure), and severe comorbidity (e.g. malignant diseases, systemic inflammatory diseases, COPD and asthma, diabetes, psychoses, psychoorganic syndromes, depression). From this group, using Cochran sampling formula,  $n = N / (1 + N(e^2))^{11}$ , a random sample of 235 subjects was created, 128 men, and 107 women, divided into age groups with a 5 year interval. Normotensive group of 235 subjects was formed from the list of 2894 registered patients without evidence of chronic diseases, matching the hypertensive group in age, gender and the absence of severe chronic diseases mentioned before.

Average blood pressure in hypertensive group was  $148 \pm 18 / 92 \pm 13$  mm Hg, and  $126 \pm 9 / 79 \pm 7$  mm Hg in normotensive group.

The mean age of a hypertensive subjects was:  $53.9 \pm 8.2$  years; and normotensive subjects:  $51.5 \pm 10.3$  years. Age difference among groups was tested with the t-test for independent samples and it was not statistically significant ( $t = 1.4$ ,  $p = 0.14$ ).

### Variables and instruments

The perception of arterial hypertension and myocardial infarction

The perception of arterial hypertension and myocardial infarction was measured separately, as a result of an appraisal of the term »hipertenzija« – hypertension and »infarkt« – myocardial infarction in the questionnaire constructed for this research, based on the principle of semantic differential. Semantic differential is a type of a rating scale designed to measure the of objects, events, and concepts. It consists of bipolar scales with opposite adjectives on each end of the scale. Number of factor of semantic differential scales were performed and 3 dimensions (factors) that people use to perceive objects, events and concepts were found: evaluation, potency, and activity<sup>12</sup>.

The questionnaire was made up of 15 seven-degree (3 2 1 0 1 2 3) bipolar scales: svijetlo/tamno (bright/dark); sporo/brzo (slow/quick); mekano/tvrdo (soft/hard); mirno/nemirno (calm/restless); dobro/loše (good/bad); aktivno/pasivno (active/passive); lagano/teško (light/heavy); značajno/beznačajno (significant/insignificant); zdravo/nezdravo (healthy/unhealthy); slatko/gorko (sweet/bitter); moćno/nemoćno (powerful/powerless); opušteno/napeto (relaxed/tense); ugodno/neugodno (pleasant/unpleasant); blisko/udaljeno (close/distant); veselo/tužno (joyful/sad).

The questionnaire was subjected to a factor analysis on principal components with an oblique rotation. Factor analysis is a method used to explain among observed in

**TABLE 1**  
RESULTS OF FACTOR ANALYSIS WITH OBLIQUE ROTATION OF  
15 SCALES OF SEMANTIC DIFFERENTIAL (ROTATED FACTOR  
MATRIX)

Scale	Factor 1	Factor 2	Factor 3	Communality
Joyful – Sad	0.69			0.59
Light – Heavy	0.66			0.50
Relaxed – Tense	0.65			0.44
Sweet – Bitter	0.64			0.43
Pleasant – Unpleasant	0.62			0.39
Calm – Restless	0.45			0.28
	61			0.45
Good – Bad	-0.38	0.68		0.69
Significant – Insignificant	-0.37	0.66		0.47
Healthy – Unhealthy		0.66		0.68
Powerfull – Powerless		0.64		0.49
Quick – Slow		0.58		0.35
Bright – Dark		0.49		0.30
				15
Active – Passive			-0.79	0.65
Hard – Soft			-0.72	0.56
Close – Distant			0.59	0.48
% of explained variance	23.35	12.98	10.26	46.99

factor loadings of 0.30 and higher are shown

terms of fewer latent variables called factors. If the latent variables are correlated, then an oblique rotation will produce a better estimate of the true factors and a better simple structure than will an orthogonal rotation<sup>13</sup>.

The factor analysis extracted 6 factors with eigen-values above 1. A scree test showed that it related to 3 factors and the factor analysis was repeated with these 3 given factors. In Table 1 the results of the questionnaire's factor analysis are shown.

The first factor, with regard to its contents, especially the scale »ugodno/neugodno« (pleasant/unpleasant) can be named »evaluation«, the second factor »potency«, because of the scale »moćno/nemoćno« (powerful/powerless); and the third factor »activity«, because of the scale aktivno/pasivno (active/passive) in its content (Table 1). Scale »dobro/loše« (good/bad) joined the second factor, instead of the first factor, as expected. Factor reliability was estimated by Cronbach's alpha coefficient for evaluation factor (6 scales). Cronbach alpha amounts to 0.73, for potency factor (6 scales) 0.69, while for activity factor (3 scales) Cronbach alpha amounts to 0.54. It is necessary to point out that unbiased estimate components can have different means and different variances, but their covariances should all be equal – which implies that they have 1 common factor in a factor analysis. Otherwise alpha is not an unbiased estimator of reliability; rather it is a lower bound on reliability.

### The blood pressure control

The blood pressure control was interpreted on a 5 degrees scale, on the basis of the average of arterial blood pressure (BP) measured at 4 p.m. three times in a week: 0 – BP >171/106 mmHg, 1 – BP from 161/101 to 170/105 mm Hg, 2 – BP from 151/96 to 160/100 mm Hg, 3 – BP from 141/91 to 150/95 mm Hg, and 4 – BP <140/90 mm Hg. Degrees from 1 to 3 represent more or less poor regulated BP, and degree 4 represent satisfying regulated BP for non-diabetic hypertensives. Data for systolic and diastolic arterial blood pressure (mm Hg) were measured in family doctors' office, on subjects left arm, after 10 min-

utes resting period, by sphygmomanometer Spiedel+Keller with arm bracelet of 29–42 cm dimensions.

### Procedure

The first step was to form group of hypertensive subjects. A normotensive group was formed matching the hypertensive group in age, gender and the absence of severe diseases as mentioned in *Subjects* section. When selected subject could not match anyone of hypertensive group in any of former mentioned criteria, he or she was replaced with the other.

All prospective subjects were acquainted with filling out the questionnaire. During the preliminary part, due to the various private reasons, 22 prospective subjects (6 hypertensive and 16 normotensive) have been excluded from further research. These subjects were replaced by randomization of remaining registered hypertensive and normotensive patients matching age, gender, and criteria described in *Subject* section. During completion of the questionnaire, the subjects were given additional explanations when required (e.g. in Croatian language adjectives »lagano/teško« mean »light/heavy«, but also »easy/hard«, and it was necessary to confirm to some participants, that in this research meaning was »light/heavy«).

### Statistical analysis

Statistical analysis was performed using factor analysis for extracting factors of semantic differential questionnaire, Kolmogorov – Smirnov test to test distribution of results, t-test and analysis of variance (ANOVA) to test group and gender differences in perception of hypertension and myocardial infarction, and regression analysis for testing perception of hypertension and myocardial infarction as independent predictors of blood pressure regulation in hypertensive subjects. In all analyses,  $p < 0.05$  was considered as statistically significant.

Statistical analysis was made using Statistical Package for Social Sciences for Windows version 13.0 (SPSS Inc., Chicago Illinois, USA).

**TABLE 2**  
PERCEPTION OF ARTERIAL HYPERTENSION AND MYOCARDIAL INFARCTION IN HYPERTENSIVE (N=235) AND NORMOTENSIVE (N=235) SUBJECTS – THE RESULTS OF A »TWO-WAY« ANALYSIS OF VARIANCE (2X2) OF FACTORS OF SEMANTIC DIFFERENTIAL

Scale (factor)	Hypertensive subjects n= 114		Normotensive subjects n=114		Main effect – group		Main effect – gender		Interactiongroup/gender	
	X	SD	X	SD	F	p	F	p	F	p
Evaluation of hypertension	-8.73	3.89	-10.11	3.91	7.19	0.003	3.28	0.073	16.23	<0.001
Evaluation of myocardial infarction	-14.15	3.54	-13.55	3.31	2.50	0.115	4.46	0.041	0.55	0.469
									w < m	
Potency of hypertension	8.59	3.71	8.80	3.71	0.14	0.733	1.17	0.305	0.29	0.629
Potency of myocardial infarction	15.25	2.51	14.22	3.31	5.68	0.021	5.58	0.023	4.58	0.029
									w < m	
Activity of hypertension	3.46	2.41	1.63	2.12	21.43	<0.001	0.18	0.678	0.08	0.789
Activity of myocardial infarction	4.39	2.55	4.28	2.34	0.07	0.794	2.15	0.159	0.05	0.837

## Results

### Perception of arterial hypertension and myocardial infarction

In Table 2 the results of a »two-way« analysis of variance (group  $\times$  gender) of semantic differential scales are shown.

Normotensive subjects evaluated hypertension as more negative term than hypertensive ones, while hypertensive subjects perceived myocardial infarction to be more potent and active than normotensive ones (Table 2). Women perceived myocardial infarction as less negative, and less potent term than men.

Hypertensive subjects evaluated myocardial infarction as more negative ( $t=9.76$ ,  $p<0.001$ ), perceiving it as more potent ( $t=14.88$ ,  $p<0.001$ ), and active term ( $t=2.57$ ,  $p=0.017$ ), than hypertension. Normotensive group perceived hypertension and myocardial infarction in the same way: myocardial infarction as more negative ( $t=6.19$ ,  $p=0.007$ ), more potent ( $t=10.89$ ,  $p<0.001$ ), and active ( $t=9.27$ ,  $p<0.001$ ).

In the following analysis, significant ( $p<0.05$ ) interactions between group and gender of subjects are shown. Figure 1 shows interactions between group and gender for potency of myocardial infarction and evaluation of hypertension.

Bonferroni correction showed that normotensive women ( $13.55\pm 2.53$ ) perceived infarct to be statistically significant ( $p<0.01$ ) less potent than hypertensive women ( $15.45\pm 2.59$ ), normotensive ( $15.30\pm 2.61$ ) and hypertensive men ( $15.49\pm 2.66$ ). Normotensive women ( $-11.62\pm 3.77$ ), second Bonferroni correction, evaluated hypertension statistically significant ( $p<0.01$ ) worse than hypertensive women ( $-8.19\pm 4.15$ ), normotensive men ( $M=-8.57\pm 4.12$ ) and hypertensive men ( $-9.33\pm 3.57$ ).

### Tested variables as predictors of regulation of arterial hypertension

#### Regulation of arterial hypertension

Regulation of arterial hypertension was measured with a five degree (0–4) scale and amounts to  $3.10\pm 0.77$ . Regulation in women ( $2.95\pm 0.72$ ) and men ( $3.19\pm 0.68$ ) was not statistically significantly different ( $t$ -test:  $t=1.51$ ,  $p=0.131$ ). There were 78 (33%) hypertensive subjects with satisfactory regulated BP ( $<140/90$  mm Hg), 86 (37%) subjects were with mildly unregulated BP ( $141/91$ – $150/95$  mmHg), 45 (19%) subjects had unregulated BP within range of  $151/96$ – $160/100$  mm Hg, 19 (8%) within range of  $161/101$ – $170/105$ . and 7 (3%) with BP over  $171/106$  mm Hg.

Regression analysis was performed with regulation of arterial hypertension as criterion variable, and gender, evaluation, potency and activity of hypertension and myocardial infarction as predictors. Perceived activity of myocardial infarction ( $\beta$  coefficient= $-0.54$ ,  $t=-5.144$ ,  $p=0.001$ ), and perceived potency of hypertension ( $\beta$  coefficient= $-0.47$ ,  $t=-4.49$ ,  $p=0.001$ ) were in statistically significant ( $p<0.05$ ) negative correlation with regulation

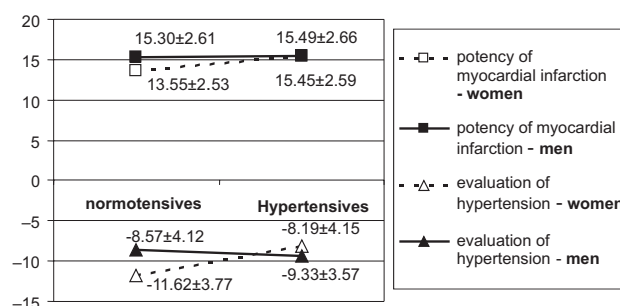


Fig. 1. Interactions between group and gender for potency of myocardial infarction and evaluation of hypertension.

of hypertension. These two variables explained 0.29 or 29% variance of hypertension regulation (multiple correlation coefficient  $R=0.54$ ).

## Discussion

The results of this research show that both study groups, hypertensive and normotensive subjects, evaluate arterial hypertension less negative than myocardial infarction as a more potent and active than arterial hypertension. The results confirm our hypothesis i.e. myocardial infarction, one of complications of arterial hypertension, is a disease which results in many restrictions for the patient and triggers fear of sudden death<sup>14,15</sup>, while that is not, to such a degree, quite the case with hypertension. Family history of hypertension and its complications influence patients perception of hypertension and its complications and should be assessed before creating rational treatment programme<sup>16</sup>. External validity of this study is limited because of quasiexperimental design, in different languages same words could have different connotative meaning, and there are supposed cross – cultural differences in perception of chronic diseases.

Hypertensive subjects evaluate hypertension less negative than normotensive subjects, although it is important to mention that both groups perceived hypertension and myocardial infarction to be negative terms. Interactions of group and gender in evaluation of hypertension and potency of myocardial infarction showed that normotensive women differed in perception from hypertensive women, normotensive and hypertensive men. Normotensive women evaluated hypertension as more negative term because hypertension and cardiovascular diseases in general are traditionally perceived as »male diseases«, what leads to a poorer cognitive focusing of normotensive women on hypertension. Schenk – Gustaffson pointed out that cardiovascular diseases are, second World Heart Federation, the most serious, neglected health problem for women in both the developing and the developed worlds<sup>17</sup>. The awareness that they are suffering from hypertension increases their cognitive focus and triggers a higher perceptual change in females, equating them with male subjects. A lower hostility in females

is a significant predictor for hypertension<sup>18</sup> which contributes to less negative evaluation of hypertension in hypertensive women. Hypertensive subjects are mostly better informed about their illness, have daily experience of treating high blood pressure, thus bringing them closer, evaluating hypertension as less negative term<sup>19</sup>.

Hypertensive subjects perceived infarct as a more potent term than normotensive subjects. Here we also found a significant interaction of group and gender, normotensive women consider myocardial infarct to be less potent than hypertensive women, normotensive and hypertensive men. Considering myocardial infarction as a »male disease«, normotensive women contemplate less on this subject than men do and when they start suffering from hypertension women consider it to be more serious and infarct as a well-known complication of hypertension, which can be manifested through the perception of infarction as having greater potency. Hogarth et al. found that, following uncomplicated acute myocardial infarction, women developed a relatively greater magnitude of sympathetic activation lasting until its resolution at 9 months<sup>20</sup>. Lunberg emphasizes gender differences in reacting to stress, women are more prone in sympathetic activation, which mediates in the onset of hypertension and cardiovascular diseases<sup>21</sup>. For these reasons, family doctors should pay more attention to women in stress, when conducting preventive programmes for cardiovascular diseases.

Differences in perceiving potency of hypertension in hypertensive and normotensive subjects were not statistically significant, although it could be expected that hypertensive subjects consider hypertension as a more potent term. Health education, which is primarily the task of the general/ family practitioner, could have some impact so that hypertensive subjects perceive their illness more potently, which would surely enhance the results of treating hypertension. Hypertensive subjects perceived hypertension as a more active term than non-hypertensive subjects which can be explained through daily treatment and control of high blood pressure, which in hypertensive subjects results in raised cognitive focus on hypertension.

Differences in perceiving the activity of infarct between tested subjects is not statistically significant. Results can be explained through increased use of suppression and rationalisation as a mechanism of defence in hypertensive subjects. Through perceiving infarct as a »male« disease, we can explain gender differences in its evaluation and potency. Women consider myocardial infarct less seriously and perceive it as less potent than male subjects. Oliver -McNeil and Artinian point out that women health issues are focused on menopause and breast cancer, leading women to underestimate their risk for cardiovascular diseases<sup>22</sup>. Women should be better informed and educated about risk factors for cardiovascu-

lar diseases and here is great responsibility for family doctors.

Significant predictors of blood pressure control among hypertensive subjects, potency of hypertension, and activity of myocardial infarction were in negative correlation with blood pressure. Hypertensive patients can easily get information about their blood pressure, measuring it at home or in family practice, that information could influence perception of hypertension and myocardial infarction. When BP regulation is insufficient, hypertensives perceive hypertension as more potent, and myocardial infarction as more active, and *vice versa*.

The results of the research point to the importance of patient's perception of arterial hypertension and its complications such as myocardial infarction because they are correlated with the blood pressure control. Perception of hypertension and its complications could help family doctors together with other well known risk factors to estimate total risk of fatal cardiovascular event, what is important before prevention measures planning<sup>23</sup>.

It is also important to know gender differences in perceiving arterial hypertension and myocardial infarction. Semantic differential is an appropriate estimator of attitudes and perceptions, and similar researches could be carried out for other chronic disease of importance for public health and the work of general/family practitioners. Also, external validity of this study is limited because of quasiexperimental design, in different languages same words could have different connotative meaning, and there are supposed cross – cultural differences in perception of chronic diseases.

## Conclusion

Hypertension was by both groups of subjects perceived as less severe disease than myocardial infarction, while both conditions were perceived as more »male« diseases. For hypertensive subjects hypertension was more active term, than for normotensives. Normotensive women differ in perception of hypertension and myocardial infarction from men regardless to hypertension. Hypertensive women converge in perception of hypertension and myocardial infarction with men.

An insufficient regulation of BP is correlated with a greater potency of hypertension and a greater activity of myocardial infarction.

Family doctors should pay more attention recognizing how their patients, especially women perceive cardiovascular diseases, because in that way they could design more effective preventive programmes.

List of used abbreviations:

BP – blood pressure

A. Ljubotina

Ul. Vitomira Paje Širole 35, 51000 Rijeka, Croatia  
e-mail: alexandar\_ljubotina@yahoo.com

## REFERENCES

1. CHOBANIAN AV, BAKRIS GL, BLACK HR, CUSHMAN WC, GREEN LA, IZZO JL JR, JONES DW, MATERSON BJ, OPARIL S, WRIGHT JT JR, ROCELLA EJ, JAMA, 289 (2003) 2560. — 2. BERGMAN MARKOVIĆ B, KRANJČEVIĆ K, STOJANOVIĆ-ŠPEHAR S, BLAŽEKOVIĆ-MILAKOVIĆ S, KERN J, VRCA BOTICA M, DOKO JELINIĆ M, MARKOVIĆ M, Coll Antropol, 33 (1) (2009) 71. — 3. STASON WB, J Am Soc Hypertens, 3 (2) (2009) 113. — 4. LUKENDA J, KOLARIĆ B, KOLČIĆ I, PAŽUR V, BILOGLAV Z, Croat Med J, 46 (6) (2005) 865. — 5. PEŠEK K, PEŠEK T, RADOŠ M, BUKOVIĆ D, FUREŠ R, ČUK V, Coll Antropol, 31 (3) (2007) 709. — 6. ROSENSTOCK LM, STRECHER VJ, BECKER MH, Health Educ Q, 15 (2) (1988) 175. — 7. MENON U, CHAMPION V, MONAHAN PO, DAGGY J, HUI S, SKINNER CS, Am J Health Promot, 21 (4) 255. — 8. ROSS S, WALKER A, MACLEOD MJ, J Hum Hypertens, 18 (2004) 607. — 9. FRIJLING BD, LOBO CM, KEUS IM, JENKS KM, AKKERMANS RP, HULSCHER ME, PRINS A, VAN DER WOUDE JC, GROUPE RP, Patient Educ Couns, 52 (1) (2004) 47. — 10. ONONESE V, MURPHY AW, BYRNE M, BRADLEY C, MACFARLANE A, Fam Pr, 23(5) (2006) 587. — 11. COCHRAN WG, Sampling Techniques (John Wiley and Sons Inc, New York, 1963). — 12. BARTOS CR, FRIDSMA DB, BUTLER BS, PENROD MJ, BECICH MJ, CROWLEY RS, J Biomed Inform, 41 (6) (2008) 1041. — 13. CUDECK R, Exploratory factor analysis. In: TINSLEY HEA, BROWN SD (Eds) Handbook of applied multivariate statistics and mathematical modeling (Academic Press, San Diego, 1970) — 14. WEISS MC, MONTGOMERY AA, FAHEY T, PETERS T, Patient Educ Couns, 53 (2004) 197. — 15. DONOHOE RT, HEFELI K, MOORE F, Resusc, 71 (2006) 70. — 16. HALL R, SAUKKO PM, EVANS PH, QUERESHI N, HUMPHRIES SE, Fam Pr, 24 (2007) 435. — 17. SCHENK-GUSTAFSSON K, Maturitas, 63(3) (2009) 186. — 18. HEER T, GITT AK, JUENGER C, SCHIELE R, WIENBERGEN H, TOWAE F, GOTTWITZ M, BLOMKALNS AL, CHEN AY, HOCHMAN JS, Am J Cardiol, 98 (2006) 160. — 19. LECLERC J, RAHN M, LINDEN W, J Pers Individ Differ, 40 (2006) 1313. — 20. HOGARTH AJ, GRAHAM LN, MARY DA, GREENWOOD JP, Eur Heart J, 30 (14) (2009) 1764. — 21. LUNBERG U, Psychoneuroendocr, 30 (2005) 1017. — 22. OLIVER-MCNEIL S, ARTINIAN NT, Am J Critic Care, 11 (2002) 221. — 23. MIRIĆ L, MIRIĆ D, DUPLANČIĆ D, KOKIĆ S, LJUTIĆ D, PEŠUĆIĆ V, ČULIĆ V, FABJANIĆ D, TITLIĆ M, Coll Antropol, 32 (2) (2008) 361.

## PERCEPCIJA ARTERIJSKE HIPERTENZIJE I INFARKTA MIOKARDA U HIPERTENZIVNIH I NORMOTENZIVNIH MUŠKARACA I ŽENA

### SAŽETAK

Ciljevi ovog istraživanja bili su ispitati percepciju arterijske hipertenzije i infarkta miokarda u hipertenzivnih i normotenzivnih muškaraca i žena, te ispitati percepciju arterijske hipertenzije i infarkta miokarda kao prediktore kontrole arterijskog krvnog tlaka u hipertoničara. U istraživanju sudjelovalo je 470 ispitanika iz 4 ordinacije obiteljske medicine u Rijeci, Hrvatska. Hipertenzivna skupina izabrana je s popisa hipertenzivnih pacijenata bez kardiovaskularnih komplikacija i ostalih težih kroničnih bolesti, dok je normotenzivna skupina izabrana s popisa pacijenata bez težih kroničnih bolesti, izjednačena s hipertenzivnom skupinom po spolu i dobi. Svaka je skupina brojala 235 ispitanika, 128 muškaraca i 107 žena. Percepcija hipertenzije i infarkta miokarda je mjerena pomoću upitnika konstruiranog prema načelima semantičkog diferencijala. Faktorska analiza izlučila je faktore evaluacije, potencije i aktivnosti. Kontrola krvnog tlaka je operacionalizirana petostupanjkom ljestvicom. Statistička značajnost određena je ispod razine 5% ( $p < 0,05$ ). Hipertenzivni ispitanici percipirali su hipertenziju manje negativnim i aktivnijim pojmom, dok su infarkt miokarda percipirali potentnijim pojmom od normotenzivnih ispitanika. Žene su percipirale infarkt miokarda manje negativnim i manje potentnim pojmom od muškaraca. Obje skupine percipirali su infarkt miokarda negativnijim, potentnijim i aktivnijim pojmom od hipertenzije. Normotenzivne žene evaluirale su hipertenziju negativnije i percipirale infarkt miokarda manje potentnim pojmom od ostalih ispitanika. Dobro kontrolirana hipertenzija povezana je s nižom percepcijom potencije hipertenzije i nižom percepcijom aktivnosti infarkta miokarda. Obje su bolesti percipirane više »muškim« bolestima. Budući da je percepcija hipertenzije i infarkta miokarda povezana s regulacijom krvnog tlaka u hipertoničara, a hipertenzija je najvažniji čimbenik rizika za infarkt miokarda, obiteljski liječnici bi trebali uložiti dodatni napor u promjeni percepcije kardiovaskularnih bolesti u svojih pacijenata, posebno u žena.

**APPENDIX**  
ENGLISH TRANSLATION OF THE SEMANTIC DIFFERENTIAL TYPE QUESTIONNAIRE

Hypertension								
Bright	3	2	1	0	1	2	3	Dark
Slow	3	2	1	0	1	2	3	Quick
Soft	3	2	1	0	1	2	3	Hard
Calm	3	2	1	0	1	2	3	Restless
Good	3	2	1	0	1	2	3	Bad
Active	3	2	1	0	1	2	3	Passive
Light	3	2	1	0	1	2	3	Heavy
Significant	3	2	1	0	1	2	3	Insignificant
Healthy	3	2	1	0	1	2	3	Unhealthy
Sweet	3	2	1	0	1	2	3	Bitter
Powerfull	3	2	1	0	1	2	3	Powerless
Relaxed	3	2	1	0	1	2	3	Tense
Pleasant	3	2	1	0	1	2	3	Unpleasant
Close	3	2	1	0	1	2	3	Distant
Joyful	3	2	1	0	1	2	3	Sad
Myocardial infarction								
Bright	3	2	1	0	1	2	3	Dark
Slow	3	2	1	0	1	2	3	Quick
Soft	3	2	1	0	1	2	3	Hard
Calm	3	2	1	0	1	2	3	Restless
Good	3	2	1	0	1	2	3	Bad
Active	3	2	1	0	1	2	3	Passive
Light	3	2	1	0	1	2	3	Heavy
Significant	3	2	1	0	1	2	3	Insignificant
Healthy	3	2	1	0	1	2	3	Unhealthy
Sweet	3	2	1	0	1	2	3	Bitter
Powerfull	3	2	1	0	1	2	3	Powerless
Relaxed	3	2	1	0	1	2	3	Tense
Pleasant	3	2	1	0	1	2	3	Unpleasant
Close	3	2	1	0	1	2	3	Distant
Joyful	3	2	1	0	1	2	3	Sad