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What is This?

Hypertensives in Russia are interested in a healthier lifestyle: results of the RELIF multicenter study*

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Abstract

Background: There are several reasons for the gap between guidelines and routine practice of cardiovascular disease (CVD) prevention. Among these patient-related factors are interest and motivation for lifestyle modification.

Design: The article represents a subgroup analysis of RELIF (REgularnoe Lechenie I proFilaktika) study conducted in 20 cities of Russia, where five polyclinics were selected randomly, with five general practitioners (GPs) in each. Each GP enrolled five consecutive hypertensive patients.

Methods: Physicians and patients completed questionnaires concerning patients' medical history, risk factors (RF), health education, interest in lifestyle changes, recommendations and compliance. Patients also completed the Hospital Anxiety and Depression Scale (HADS). Statistical analysis was performed by variation statistics standard algorithm.

Results: 1078 patients were enrolled. The survey revealed a high prevalence of cardiovascular RF (e.g. hyperlipidemia in 64.23 per cent of patients, obesity in 43.97 per cent, smoking in 43.51 per cent of men) as well as of unhealthy food habits. Anxiety was seen in 55.4 per cent of patients and depressive symptoms in 44.8 per cent. A minority knew the cardiovascular RF: hypertension was listed by 22.4 per cent of men and 32.5 per cent of women; obesity by 18.3 per cent of men and 27.8 per cent of women; smoking by 34.9 per cent (men) and 14.9 per cent (women); and cholesterol by 3.3 per cent (men) and 7.7 per cent (women). Among both men and women, 30 per cent knew the limits of normal BP. Many patients (86 per cent) received information predominantly from GPs, and were not satisfied with it. A large number of patients (79.3 per cent) demonstrated various degree of readiness for lifestyle changes, and 30.62–48.8 per cent of patients were interested in additional education.

Conclusions: The study demonstrates both high prevalence of RF in hypertensives in Russia, and low level of patient's knowledge on CVD-related issues. The high level of patients' motivation for lifestyle changes offers possibilities for future improvement.

Introduction

It has been shown repeatedly that prevention of cardio-vascular diseases (CVD) in routine practice is insufficient.[1–4] The wide gap between evidence-based medicine and clinical practice has a number of causes.[4] The most important among these are physician-related factors (not all physicians follow guidelines) and patient-related factors (low adherence to physicians' recommendation on lifestyle management and medications).[5–7] While physician-related factors are relatively well learned,[5–10] there is a lack of information concerning the patient's interest and motivation for lifestyle modification. The majority of publications that we have found dealt with patients' readiness for smoking cessation.[11–16]

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*Results of the RELIF study have been published previously.

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The rate of self-reported willingness to quit was usually high and ranged from 41.4 to 80 per cent. Of those, approximately 30–50 per cent were planning a quit attempt in the near future or showed interest in the smoking cessation program offered in the study. In one study almost everybody who expressed an interest was even willing to pay.[11]

As for the studies concerning patients' interest towards other risk factors and healthy lifestyle as a whole, their number is very limited. I. Llovera et al.[17] established that 52 per cent of emergency department populations (both patients and visitors) would be interested in obtaining information about stress reduction, 51 per cent about physical activity and 42 per cent about blood pressure screening. According to questions posed by B.Danielsson et al.,[18] 69 per cent of middle-aged Stockholm inhabitants considered it important to know their lipid values. The same authors found a low level of motivation for a healthy diet in the same population: two-thirds doubted that they could change their eating habits.[19]

This article presents a subgroup analysis of the RELIF (REgularnoe Lechenie I proFilaktika) multi-center study concerning interest and motivation of patients with arterial hypertension (AH) for lifestyle and risk factor modification, as well as counseling and recommendations given by their GPs.

Methods

The RELIF study has been conducted in 20 big cities of the Russian Federation (a total of about 29 million inhabitants). The study covered a large area of Russia from the West (St Petersburg) to the East (Krasnoyarsk). In every city five polyclinics were included (each providing ambulatory care for 30–40 000 inhabitants) and in every polyclinic, five GPs were included. Polyclinics and GPs were selected randomly. Every GP contributed five patients with established AH and/or CHD who came to visit a physician. This paper presents a subgroup analysis of hypertensive patients without CHD.

We designed two questionnaires: (1) completed by a physician and (2) by a patient. In the physician's questionnaire (1), data were entered concerning the patient's clinical status (severity and duration of AH; AH complications; comorbidities); RF and their levels; lifestyle recommendations given and prescribed medications; patient's adherence to treatment (low, moderate or high according to physician's opinion).

Patients were asked to complete a self-administered questionnaire (2) containing demographic, employment, physical data; smoking status; usual alcohol intake (average per week); income level; physical activity level; eating habits (fish and fruit/vegetables consumption; fat restriction; salt intake); knowledge about risk factors and their goals; the main sources of information about disease; interest and motivation for lifestyle changes; recommendations on lifestyle changes given by GPs.

Patients were considered adherent to antihypertensive treatment if they agreed with three statements: "I take my drugs every day"; "I take drugs strictly in doses recommended by my physician"; "I do not miss any intake of my drugs".

The psychological state of patients was assessed by means of the Hospital Anxiety and Depression Scale (HADS).[20] According to the original evaluation of anxiety subscale (HADS-A) and depression subscale (HADS-D), a cut-off score of 8–10 indicates subclinical anxiety/depression symptoms, and a score of 11 or more, clinically relevant symptoms of anxiety/depression.

Statistical analysis

Analysis of the study results was performed using the SAS system (Statistical Analysis System, SAS Institute Inc., USA) by applying standard algorithm of variation statistics. For numeric values (e.g. AH levels) derived from interval scales, arithmetic mean, standard deviation and standard error were calculated, as well as values of the cut-off points in the distribution (1, 5, 10, 25, 50, 75, 90, 95, 99 per cent), which allowed determination of the median, mode, variance and interquartile range. For qualitative data derived from nominal scales (presence/absence of particular characteristics, e.g. smoking) and ordinal variables derived from rank scales (e.g. AH stages) we determined the frequency of target variable in percentages or the frequency of various rank score respectively. Multiple stepwise logistic regressions were performed to assess factors associated with not being ready for lifestyle changes.

Results

Patient participation rate reached 78.3 per cent. Approximately 70 per cent of dropouts were due to patients' failure to complete the questionnaire properly, the rest were due to patient refusal. A total of 1078 AH patients aged from 18 to 92 years were enrolled; 24.4 per cent (263) were male, 75.6 per cent (815) female. Baseline characteristics of patients including age, educational level, marital status and RF are presented in Table 1. We found unacceptably high rates of modifiable RF in AH patients.

The patients' opinion about cardiovascular RF is presented in Figure 1. Data regarding patients' knowledge about probable complications of AH and diagnostic criteria are listed in Table 2. All these data

Table 1. Risk factors and characteristics of studied hypertensive patients

	Men (n = 263)		Women (n = 815)		p for male vs female patients
	Mean/%	SD	Mean/%	SD	
Age (years)	54.6	11.76	56.6	10.9	<0.05
<40	10.12		4.87		
40-59	58.75		60.42		<0.008
>60	31.13		34.71		
Education					
Incomplete secondary/secondary	61.98		68.48		<0.003
Higher	38.02		31.52		
Married	77.61		58.66		<0.001
Smoking					
Non-smoker	26.72		88.63		
Ex-smoker	29.77		4.33		<0.001
Current smoker	43.51		7.05		
Alcohol consumption (pure ethanol/week)					
Non-drinkers	1.17		0.25		
<100 ml (<77.8 g)	40.08		78.99		<0.001
100–200 ml (77.8–155.6 g)	50.58		20.50		
>200 ml (>155.6 g)	8.17		0.25		
Physical activity level (min per day)					
<30	18. 67		18.26		
30–60	39.00		41.21		ns
>60	42.33		40.53		
Body mass index (kg/m^2)	28.38	4.95	30.29	5.13	<0.001
25.0–29.9	46.90		37.28		<0.001
30.0+	30.62		48.35		
Waist (cm)	94.78	15.85	92.74	15.08	<0.1
Waist (>102/88 cm in men/women)	27.60		62.68		<0.0001
Total cholesterol > 5.0 mmol/l	64.55		69.68		ns
LDL > 3.0 mmol/l	63.64		60.92		ns
HDL < 1.0 mmol/l	25.00		39.76		ns
Triglycerides > 1.7 mmol/l	48.15		50.90		ns
Diabetes mellitus	9.13		12.27		ns
HADS-A	7.08	3.71	8.48	3.91	<0.001
8–10	24.81		29.26		
>10	19.77		29.64		<0.001
HADS-D	6.46	3.55	7.22	3.71	<0.01
8–10	24.90		27.48		ns
>10	15.56		18.70		
Hypertension duration (years)	9.26	7.65	11.43	7.65	<0.001
Systolic BP at visit	145.93	17.72	145.71	15.61	ns
Diastolic BP at visit	88.63	9.35	89.00	9.44	ns
BP < 140/90 mmHg not achieved	71.11		72.97		ns

SD: standard deviation, Vs: versus, Ns: not significant, LDL: low density lipoprotein, HDL: high density lipoprotein, HADS-A: Hospital Anxiety and Depression Scale anxiety subscale, HADS-D: Hospital Anxiety and Depression Scale depression subscale, BP: blood pressure.
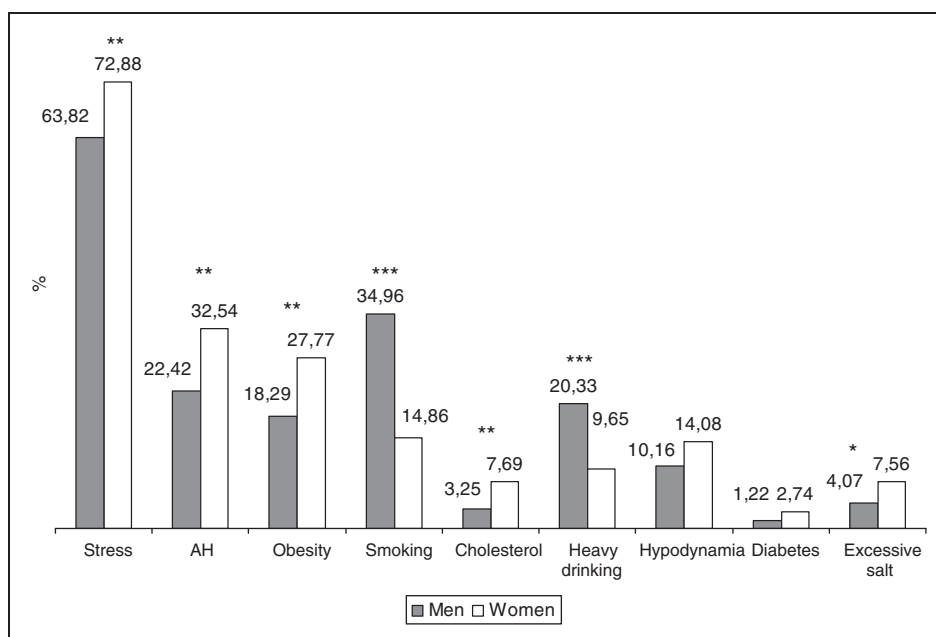
Figure 1. Patients' knowledge and beliefs about cardiovascular risk factors. * p < 0.05; **p < 0.01; ***p < 0.001 for differences between male and female patients.

Table 2. Hypertensive patients' knowledge about their disease, practice of home BP monitoring and readiness for lifestyle changes

	Men (n = 263)	Women (n = 263)	*p* for male vs female patients
Have a tonometer at home (%)	87.45	89.40	ns
Home BP monitoring (%):			
Never	1.91	0.25	
Very rarely	12.98	4.96	
Only if feeling unwell	33.97	38.34	<0.001
1–2 times per week	19.85	13.15	
Every day	31.30	43.30	
Patients' knowledge on BP limits (%)			
SBP > 140 mmHg	43.35	46.99	ns
DBP > 90 mmHg	47.53	46.01	ns
Both criteria > 140/90 mmHg	32.32	30.06	ns
Patients' knowledge about AH complications (%):			
Stroke	72.5	86.87	<0.001
Myocardial infarction	59.17	56.90	ns
Renal failure	1.25	1.86	ns
Retinopathy	0.83	0.80	ns
Death	4.58	3.71	ns
Patients' readiness to change lifestyle (%):			
I am not ready	7.66	8.02	
I often think about it	49.04	41.23	<0.05
I am happy to do so if I know what to do	30.27	39.47	
I have already been successful	13.03	11.28	

BP: blood pressure, vs: versus, ns: not significant, SBP: systolic blood pressure, DBP: diastolic blood pressure, AH: arterial hypertension.

were obtained from open-ended questions (patients were asked to recall and formulate cardiovascular RF, complications, etc). Our results demonstrate a low level of hypertensive patients' health literacy. Overall, men were less informed than women.

In our sample, 79.3 per cent of hypertensives demonstrated different degrees of readiness for healthier lifestyle changes (Table 2); 13 per cent of patients have obtained successful lifestyle changes already. We have found a surprisingly high level of adherence to home self-monitoring of BP.

Table 3 demonstrates factors found to be associated with not being ready for lifestyle changes by means of multiple regression analysis. These patients were older, less educated and less anxious. They restricted dietary fat less often, and they showed a low level of RF knowledge. These patients were more likely to consider their GP a main source of health-related information; however, they obtained lifestyle advice from GPs less often than the others. Clinical features of patients such as AH severity and duration or presence of complications had no significant influence on readiness to change lifestyle changes.

The main sources of health-related information for patients are shown in Figure 2. The majority (86 per cent) considered their GP a primary source of information regarding CVD. Other sources of information, e.g. cardiologists, the media, friends/relatives and the internet, were noted less often.

Up to 50 per cent of hypertensive patients expressed interest in receiving additional advice on several health-related issues. Data concerning the requirements for information in both sexes are presented in Figure 3. Women are more interested in such aspects of prevention as stress, diet and pharmacological treatment, while men are more concerned with smoking and alcohol.

It seems that GPs' efforts on lifestyle counseling are insufficient. Figure 4 presents non-pharmacological recommendations on risk factor management given to patients (as reported by physicians) and received by patients (as reported by patients). There is a large discrepancy between the doctor's and patient's perception. According to patients, 18 per cent did not receive any recommendations on risk factors management at all.

Discussion

The most important result of the present study is the high motivation of hypertensive patients to make their lifestyle healthier. More than 90 per cent of hypertensives expressed some degree of interest in healthier lifestyle. The proportion of patients willing to receive advice on risk factors reached 50 per cent (women being more interested than men). An Australian survey detected an even higher level of interest with 80 per cent of patients desiring more information about lifestyle changes,[21] but these were CHD patients recently discharged from hospital after percutaneous coronary intervention (PCI) so it's natural that their motivation was higher than that of out-patient hypertensives.

We found a surprisingly high frequency of home BP monitoring, which confirms patients' motivation for RF control. The vast majority (above 87 per cent) of hypertensives in the study had a tonometer at home. About 40 per cent of hypertensive women and one-third of men measured their BP every day. In a Japanese study[22] a lower level of daily BP monitoring was found: only 54 per cent of patients had a tonometer at home and only 17 per cent measured their BP every day.

The other significant result in our study was that more than 80 per cent of hypertensives regarded their

Table 3. Factors associated with not being ready for lifestyle changes: results of multiple regression analysis

Variable	Parameter estimate	Wald chi-squared	Pr > chi-squared	Odds ratio	Wald confidence limits	
					Lower	Upper
Age $\geq$ 60 years	0.9939	26.1159	0.0001	2.702	1.845	3.955
Incomplete secondary education	0.5359	4.8803	0.0272	1.709	1.062	2.749
No anxiety	0.4097	5.5056	0.0190	1.506	1.070	2.121
No dietary fat restriction	0.3638	4.0651	0.0438	1.439	1.010	2.049
Not knowing risk factors for AH	1.1342	16.7162	0.0001	3.109	1.805	5.354
No lifestyle advice from GP	1.5119	70.0571	0.0001	4.535	3.183	6.462
GP is the main source of information	0.6570	4.8347	0.0279	1.929	1.074	3.465

AH: arterial hypertension, GP: general practitioner.

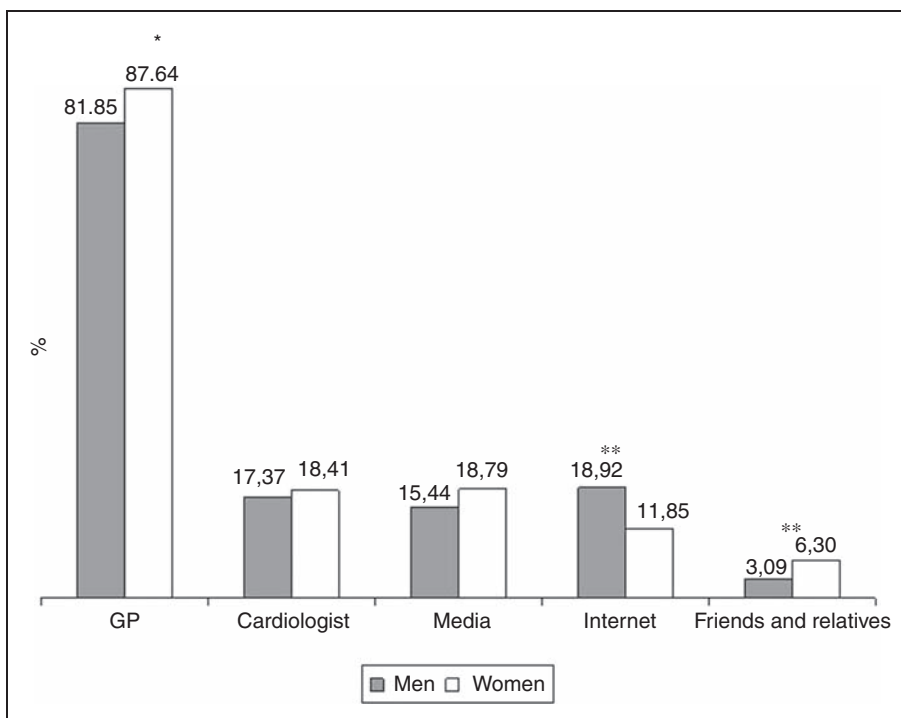**Figure 2.** Main sources of medical information for arterial hypertension patients. GP: general practitioner
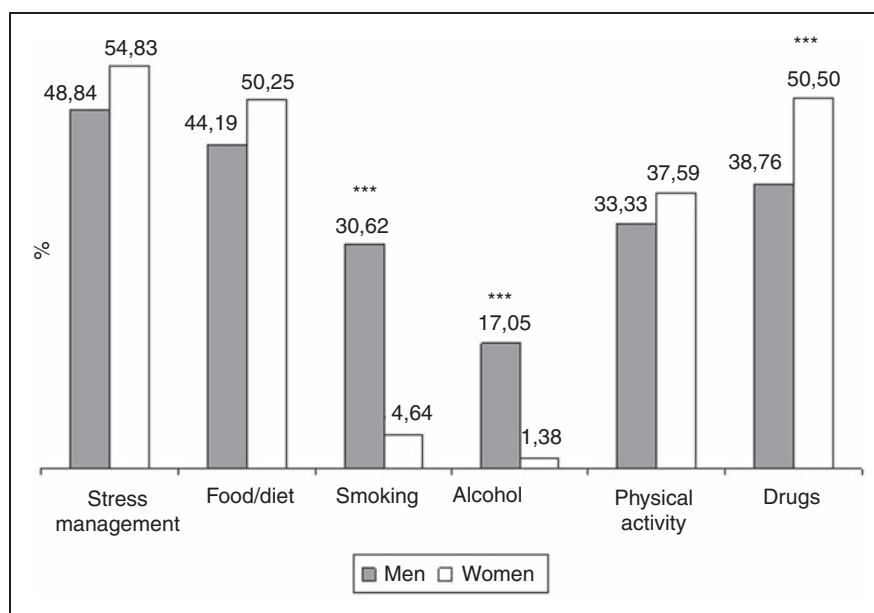*$p < 0.05$; **$p < 0.01$ for differences between male and female patients.

Figure 3. Topics on which patients want additional information and recommendations from their GP. GP: general practitioner
***$p < 0.001$ for differences between male and female patients.

GP as a primary source of information about the disease. In fact, it is natural for people to consider physicians to be the best health educators[21,23] but the limited role of other sources of information for our patients may be partly due to lack of availability. For instance, there are not that many internet users in Russia, especially among elderly people. According to the survey by J.A. Diaz et al.,[23] 53.5 per cent of out-patients in the
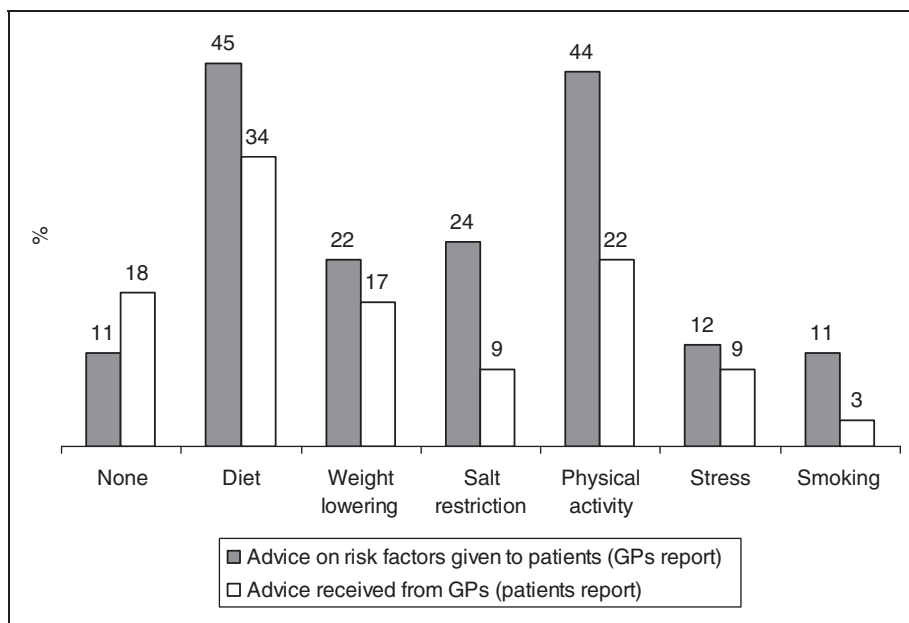
Figure 4. Recommendations on risk factors given by GPs (n = 500) and received by their hypertensive patients (n = 1078) GP: general practitioner.

USA used the internet for health information and 60 per cent of internet users felt that information from websites was as valid as their doctor's advice. Our finding seems to be very positive, because it shows one of the main targets for CVD prevention – lifestyle counseling provided by the GP. It was repeatedly shown that medical advice and information given by physicians had an impact on patients' lifestyle choice.[24–26]

Our study revealed that GPs provide inadequate counseling on RF. Although the majority of GPs reported giving advice on healthy lifestyle, every fifth patient received no recommendations on RF management. Especially convincing is the information obtained from patients who declared themselves not willing to change their lifestyles. They received recommendations on lifestyle modification less often; nevertheless, they considered their primary care physician to be the main source of information more often than the rest of the respondents. Many physicians indicated patients' low interest in prevention as a reason for inadequate counseling. In fact, the situation is the opposite, and it seems to be a consequence of poor communication between physicians and their patients.

The patient's decision about making appropriate lifestyle changes is closely associated with his or her beliefs about the nature, causes, symptoms, complications and prognosis of hypertension. The majority of hypertensives included in the RELIF study had unhealthy lifestyles, and it is no surprise that they demonstrated a low level of knowledge regarding cardiovascular RF and complications of their disease. Those patients who refused lifestyle changes showed a particularly poor level of RF knowledge. The fact that patients considered stress to be much more important than high cholesterol or a sedentary lifestyle deserves some discussion. This finding is obviously related to poor health literacy, but there can also be other explanations. In fact it is much easier for a person to think that the major cause of his or her illness is stress rather than immoderate eating or laziness. Moreover, people often consider stress to be an integral part of contemporary life in developed countries and think they can do nothing about it.

The majority of patients were aware of the complications of hypertension – stroke and myocardial infarction. Very similar results were obtained in the Australian study, which was performed in two general practices: 55 per cent of patients believed that stress was a cause of their high BP; and more than 60 per cent of patients were aware that stroke and heart attack are possible consequences of hypertension. At the same time there were more patients (65 per cent) who described BP within appropriate definitions.[27]

The main advantages of the RELIF study include its scale, high participation rate and complex approach, with both physicians and patients being involved.

One of the possible limitations of the study is related to patients' self-reported data on some RF, especially smoking, alcohol intake, food habits and physical activity level. The other possible limitation is using GPs and patients only in Russia. Comparative studies

on management of lifestyle, RF and drug choices in CVD patients performed in a large number of countries, such as EUROASPIRE III,[3] seem to have an advantage. However, we think that data on hypertensive patient's interest in health-related information and motivation for lifestyle changes derived from our study can be applicable for CVD prevention in other countries.

Conclusion

The most important finding of the RELIF study was the high level of self-reported motivation of hypertensive patients in Russia for lifestyle and risk factor modification. Nevertheless the majority of hypertensives do not achieve proper blood pressure control, as well as lifestyle and risk factors goals, set by European and National guidelines. This is probably due to insufficient effort from the primary care service. However, since the majority of patients consider their GPs to be the main source of information, GP education on lifestyle counseling should become one of the main targets for future interventions.

Funding

References

1. Wolf-Mayer K, Cooper RS, Kramer H, Banegas JR, Giampaoli S, Joffres MR, et al. Hypertension treatment and control in five European countries, Canada, and the United States. *Hypertension* 2004; 43(1): 10–17.
2. Jokisalo E, Enlund H, Halonen P, Takala J and Kumpusalo E. Factors related to poor control of blood pressure with antihypertensive drug therapy. *Blood Press* 2003; 12(1): 49–55.
3. Kotseva K, Wood D, De Backer G, De Bacquer D, Pyörälä K and Keil U. EUROASPIRE Study Group (Apr 2009). EUROASPIRE III: a survey on the lifestyle, risk factors and use of cardioprotective drug therapies in coronary patients from 22 European countries. *Eur J Cardiovasc Prev Rehabil* 2009; 16(2): 121–137.
4. Sabate E. *Adherence to Long-term Therapies: Evidence for Action*. Geneva: WHO, 2003, pp.7, 12, 27–30, 108.
5. Graham IM, Stewart M and Hertog GL (on behalf of the Cardiovascular Round Table Task Force). (2006). Factors impending the implementation of cardiovascular prevention guidelines: findings from a survey conducted by the European Society of Cardiology. *Eur J Cardiovasc Prev Rehab* 2006; 13(5): 839–845.
6. Wang L. Physician-related barriers to hypertension management. *Med Princ Pract* 2004; 13(5): 282–285.
7. Svensson S, Kjellgren KI, Ahlner J and Saljo R. Reasons for adherence with antihypertensive medication. *Int J Cardiol* 2000; 76(2–3): 157–163.
8. Hagemeister J, Schneider CA, Barabas S, Schadt R, Wassmer G, Mager G, et al. Hypertension guidelines and their limitations-the impact of physicians' compliance as evaluated by guidelines awareness. *J Hypertens* 2001; 19(11): 2079–2086.
9. Ragot S, Sosner P, Bouche G, Guillemain J and Herpin D. Appraisal of the knowledge of hypertensive patients and assessment of the role of the pharmacists in the management of hypertension: results of a regional survey. *J Hum Hypertens* 2005; 19(7): 577–584.
10. Heidrich J, Behrens T, Raspe F and Keil U. Knowledge and perception of guidelines and secondary prevention of coronary heart disease among general practitioners and internists. Results from a physician survey in Germany. *Eur J Cardiovasc Prev Rehab* 2005; 12(6): 521–529.
11. Vavrík M, Matejka P and Svec P. A survey into smokers' interest in quitting smoking and in the provision of smoking cessation counselling in community pharmacies. *Ceska Slov Farm* 2005; 54(4): 178–183.
12. Boudreaux ED, Kim S, Hohrmann JL, Clark S and Camargo CA. Interest in smoking cessation among emergency department patients. *Health Psychol* 2005; 24(2): 220–224.
13. Bernstein SL and Cannata M. Nicotine dependence, motivation to quit, and diagnosis in emergency department patients who smoke. *Addict Behav* 2006; 31(2): 288–297.
14. Sherman SE, Yano EM, Lanto AB, Simon BF and Rubenstein LV. Smokers' interest in quitting and services received: using practice information to plan quality improvement and policy for smoking cessation. *Am J Med Qual* 2005; 20(1): 33–39.
15. Boudreaux ED, Baumann BM, Friedman K and Ziedonis DM. Smoking stage of change and interest in an emergency department-based intervention. *Acad Emerg Med* 2005; 12(3): 211–218.
16. Murray RL, Coleman T, Antoniak M, Fergus A, Britton J and Lewis SA. The potential to improve ascertainment and intervention to reduce smoking in primary care: a cross sectional survey. *BMC Health Serv Res* 2008; 8: 6.
17. Llovera I, Ward MF, Ryan JG, LaTouche T and Sama A. A survey of the emergency department population and their interest in preventive health education. *Acad Emerg Med* 2003; 10(2): 155–160.
18. Danielsson B, Aberg H and Strender LE. Evaluation of changes in public interest concerning lipids and other cardiovascular risk factors between 1990 and 1995. *Scand J Prim Health Care* 2000; 18(3): 183–187.
19. Danielsson B and Aberg H. The public view on cardiovascular risk factors and changes in lifestyle. *Scand J Prim Health Care* 1995; 13(1): 74–80.
20. Zigmond AS and Snaith RP. Hospital Anxiety and Depression Scale. *Acta Psychiat Scand* 1983; 67(6): 361–370.
21. Higgins RO, Murphy BM, Le Grande MR, Parkinson A, Worcester MUC and Goble AJ. Expressed preferences for health education of patients after percutaneous

coronary intervention. *Eur J Cardiovasc Prev Rehabil* 2005; 12(6): 572–579.

22. Girerd X, Radauceanu A, Achard JM, Fourcade J, Tournier B, Brillet G, et al. Evaluation of patient compliance among hypertensive patients treated by specialists. *Arch mal coeur vaiss* 2001; 94(8): 839–842.

23. Diaz JA, Griffith RA, Ng JJ, Reinert SE, Friedmann PD and Moulton AW. Patients' use of the internet for medical information. *J Gen Intern Med* 2002; 17(3): 180–185.

24. Dubiel M, Cwynar M and Januszewicz A. Patient's education in arterial hypertension. *Blood Press Suppl* 2005; 2: 53–56.

25. Domino FJ. Improving adherence to treatment for hypertension. *Am Fam Physician* 2005; 71(11): 2089–2090.

26. Ohta Y, TsuchihashiT, Ueno M, Kajioka T, Onaka U, Tominaga M, et al. Relationship between the awareness of salt restriction and the actual salt intake in hypertensive patients. *Hypertens Res* 2004; 27(4): 243–246.

27. Taylor C and Ward A. Patients' views of high blood pressure, its treatment and risks. *Aust Fam Physician* 2003; 32(4): 278–282.