

## A comparative analysis of the psychological structure of perfectionism in patients with hypertension at work and patients with essential hypertension

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*The main concern of our study was to conduct a comparative analysis of perfectionism indices showed by patients with 'hypertension at work' against the indices of healthy people and patients with essential hypertension. We also aimed at establishment of correlation between perfectionism indices and intensity of the emotional burnout syndrome (EBS) for the same groups of participants. We tested 85 patients with hypertension at work, 85 patients with essential hypertension and 82 healthy people, equable in sex and age. We succeeded to show that patients with essential HPT, and particularly hypertension at work, differ from healthy people by stronger manifestation of perfectionism as a personality characteristic. Its structure for both groups of patients reveals an exaggerated factor of 'socially prescribed perfectionism', while healthy people would accentuate the factor of 'overly raised self aspirations and claims'. The structure of perfectionism for patients with hypertension at work has a remarkably disharmonious character as compared with the one of healthy people or patients with essential hypertension: 'socially prescribed perfectionism' index considerably outscores other parameters. We also succeeded to establish a correlation between the indices of perfectionism and intensity of EBS for all groups of participants. 'Socially prescribed perfectionism' appears to be closely related to EBS parameters in the two sub-groups of HTN patients, though patients with HTN at work reveal higher indices of correlation, if compared with essential HTN. The factor of 'polarized thinking' has no actual correlation with the parameters of the emotional burnout syndrome.*

*Keywords: Perfectionism, hypertension at work, essential hypertension, emotional burnout syndrome (EBS), Maslach Burnout Inventory (MBI), Multi-dimensional Perfectionism Scale of Hewitt and Flett (MPS), Perfectionism questionnaire of Kholmogorova and Garanyan.*

## Un análisis comparativo de la estructura psicológica del perfeccionismo en pacientes con hipertensión en el trabajo y pacientes con hipertensión esencial

*El interés principal de nuestro estudio fue realizar un análisis comparativo de los índices de perfeccionismo mostrados por los pacientes con "hipertensión en el trabajo" comparados con los índices de las personas sanas y pacientes con hipertensión esencial. Otra meta fue el establecimiento de la correlación entre los índices de perfeccionismo y la intensidad del síndrome de burnout emocional (SBE) para los mismos grupos de participantes. Pusimos a prueba a 85 pacientes con hipertensión en el trabajo, 85 pacientes con hipertensión esencial y 82 personas sanas, ecuanímenes en el sexo y la edad. Hemos logrado demostrar que los pacientes con HPT esencial, y en particular con la hipertensión en el trabajo, se diferencian de las personas sanas por la manifestación más fuerte de perfeccionismo como una característica de la personalidad. Su estructura en ambos grupos de pacientes revela un factor exagerado de 'perfeccionismo socialmente prescrito', mientras que las personas saludables podrían acentuar el factor de "propias aspiraciones y reclamaciones excesivamente elevadas". La estructura del perfeccionismo para los pacientes con hipertensión en el trabajo tiene un carácter notablemente inarmónico en comparación con la de las personas sanas o pacientes con hipertensión esencial: el índice del "perfeccionismo socialmente prescrito" considerablemente superaba otros parámetros. También hemos logrado establecer una correlación entre los índices de perfeccionismo y la intensidad de SBE para todos los grupos de participantes. 'Perfeccionismo socialmente prescrito' parece estar estrechamente relacionado con los parámetros de SBE en los dos subgrupos de pacientes con HTN, aunque los pacientes con HTN en el trabajo revelan mayores índices de correlación, si se compara con la HTN esencial. El factor de "pensamiento polarizado" no tiene ninguna correlación real con los parámetros del síndrome de burnout emocional.*

*Palabras clave: perfeccionismo, hipertensión en el trabajo, hipertensión esencial, Síndrome de Burnout Emocional (SBE), Maslach Burnout Inventory (MBI), Escala de Perfeccionismo Multidimensional de Hewitt y Flett (MPS), Cuestionario de perfeccionismo de Kholmogorova y Garanyan.*

### Introduction: A landscape of challenges

Hypertension (HTN) continues to be one of the most important issues in contemporary medicine and clinical psychology (Molinari, Compare, & Parati, 2006; Chockalingam, 2008). Present-day science admits a multiple-factor genesis of HTN. Genetic as well as environmental factors play an undisputed part in its formation. However, it is a well established fact that psychological and social factors prevail in etiology and pathogenesis of HTN. A half century of psychoso-

matic research has been performed in an effort to clarify the psychosomatic nature of HTN in the hopes of improving our understanding and treatment of this disorder (Alexander, 1950; Mann, 2012). It may be taken for granted that one of the reasons for dysregulation of blood pressure (BP) is lingering emotional overstrain, emerging in stress-yielding circumstances. Today researchers agree in opinion that recurring BP elevation caused by emotional distress eventually leads to structural vascular changes and sustained HTN (Campese, 1994; Dimsdale, 2008; Mann, 2012; *et al.*).

Scientists discover more and more patients whose BP values during work appear to be higher than those values during free time. This form of HTN is called 'HTN at work' (Stork, Schrader, Mann, & Noring, 1992). HTN at work is considered to be a form of 'stress-induced HTN' (Karasek, 1998). According to Stork, Schrader, Mann, & Noring (1992), HTN during working time was diagnosed in 19% patients with normal BP during periodical ambulatory monitoring. This is mostly related to persons, who work under emotional stress. Most researchers agree that personality characteristics of a subject, as well as specificity of emotional regulation processes play a considerable part in formation of HTN at work (Cottingham, Matthews, Kuller, 1986; Chandola *et al.*, 2008; O'Donnell, Brydon, Wright, & Steptoe, 2008; Pervichko, Zinchenko, & Ostroumova, 2013; Zinchenko, Pervichko, & Ostroumova, 2013). Despite the long-established enquiry into the problem, there is a question still to be answered - why, aware of the unfortunate consequences, people never hesitate to enter the situations of social and working interactions that go far beyond their adaptive abilities.

To answer the question we shall consider such personality factor as perfectionism.

The notion of perfectionism suggests the tendency of individual to lay unduly high self-claims and to follow the overly high standards (Hollender, 1965; Hewitt, & Flett, 1998, 2002). Today many scientists share the view that excessive yearning for perfection brings down productivity and may be closely attended by the risk of mental and psychosomatic disorders (Hewitt, & Flett 2002; Garanyan, & Yudeeva, 2009; Rice, Ashby, & Gilman, 2011; Ashby, Noble, & Gnilka, 2012; *et al.*).

In recent decades the causes of perfectionism and its effect upon psychological welfare of an individual retain a leading position in the range of scientific studies. There appeared a hypothesis that certain features of perfectionism in personality structure are provoked by high frequency and lasting character of stress-generating situations in every-day life, as well as none-adaptive ways of stress control (Hammen, 1991; Greenspon, 2002; Hewitt, & Flett, 2002). It was demonstrated that to compensate painful experience of failure people with high level of perfectionism would employ two dysfunctional strategies of behaviour in stressful situations: avoidance behaviour (e.g. procrastination - putting off significant matters), or the other extreme, over-mobilization, which runs the risk of burnout

(Burns, 1980). There was established a significant correlation between intensity of perfectionism and severity of emotional burnout (Appleton, Hall, & Hill, 2009; Tashman, Tenenbaum, & Eklund, 2010). Consequently, more often than not psychologists and clinicians tend to regard perfectionism as prognostically unfavourable personality factor.

Hamachek (1978) was one of the first psychologists to argue for two distinct types of perfectionism, classifying people as normal perfectionists and neurotic perfectionists. The so called 'normal perfectionism' brings satisfaction through diligent work, suggests self-development and improvement, but it leaves the person still able to accept the fact that there are limits for his/her potential to reach an ideal result. 'Neurotic perfectionism' maintains that nothing is perfect enough. It makes the individual inferior and vulnerable, entrapping him into self-destroying endeavors, when each new task will turn into yet another menacing challenge (Hamachek, 1978). As Hamachek believes, the one type of perfectionism will loudly tell from the other if we turn to the main constructs of the theory of achievement motivation. 'Healthy perfectionists' strive after success and self-development, 'neurotic perfectionists' have failure misgiving as a basic motivation (Hamachek, 1978; Stoeber, & Otto, 2006; Garanyan, & Yudeeva, 2009; Rice, Ashby, & Gilman, 2011; Ashby, Slaney, Noble, Gnilka, & Rice, 2012).

It has to be admitted that despite all these years of study, the phenomenon of perfectionism still poses a principal question: what makes our self-claims pathogenic and turns them into a self-destructive chase after the unattainable? To all appearance, the answer may reveal itself in the analysis of the structure of perfectionism.

Initially perfectionism was described as a univariate construct. Nowadays almost all scientists agree that perfectionism has a multivariate structure (Hewitt, & Flett, 1998, 2002; Garanyan, Kholmogorova, & Yudeeva, 2001; Garanyan, & Yudeeva, 2009; Rice, Ashby, & Gilman, 2011; Ashby, Noble, & Gnilka, 2012; Sherry, Gralnick, Hewitt, Sherry, & Flett, 2014; *et al.*). However, different authors mark out different components for perfectionism structure.

The widely-spread model suggested by Hewitt and Flett would distinguish 'Self-oriented', 'Others oriented', and 'Socially prescribed' perfectionism (Hewitt, & Flett, 1998, 2002).

In Russian psychological studies of Garanyan, Kholmogorova, & Yudeeva (2001) there established a distinction of five constituents within the structure of pathological perfectionism. These are the following:

- Apprehension of higher demands allegedly imposed by other people (constant competitive matching against other persons).
- Overly raised self-aspirations and claims.
- High standards of activity along with commitment to the extreme of 'most successful'.

- Selectivity of information on one's failures and fallacies.
- Polarized thinking. This parameter reveals a particular style in thinking, which suggests the principle 'all or nothing' (Garanyan, Kholmogorova, & Yudeeva, 2001).

Fundamental distinction of the present model of perfectionism from many other known today lies in the fact that apart from unduly high standards of activity and pretensions, its personal construct 'perfectionism' comprises as well cognitive parameters. Potent explanatory means of the model have been proved in a number of Russian studies. Its authors argue that the model may help distinguish features of normal (healthy) and neurotic (pathological) perfectionism, which is equally important in theoretical and practical fields (Garanyan, & Yudeeva, 2009). But in our view the present model of perfectionism fails to give full consideration to such an important parameter indicated by Hewitt and Flett as 'Others-oriented perfectionism'. Hence, in our diagnostics we employed both questionnaires for perfectionism - the one compiled by Hewitt and Flett (Hewitt, & Flett, 1998; Gracheva, 2006), and the other suggested by Kholmogorova and Garanyan (Garanyan, & Yudeeva, 2009).

## Research objectives and hypotheses

The primary aim of this research is to conduct a comparative analysis of perfectionism indices in the groups of patients with HTN at work, patients with essential HTN, and healthy subjects. It also aims to show a correlation between the indices of perfectionism and intensity of emotional burnout for the represented groups of participants.

In accordance with our general theoretical hypothesis the presence of clear-cut features of perfectionism appear to be an important psychological factor, which may lead to signs of emotional burnout and, in case of clinical predisposition, to HTN at work.

The study brought to testing the following empirical hypotheses:

- Perfectionism indices are more distinct in HTN patients than in healthy people.
- Within the structure of perfectionism in patients with HTN at work there are more distinct indices of the 'Socially prescribed perfectionism', as compared to patients with essential HTN.
- HTN patients and healthy people that reveal higher perfectionism indices, will show stronger manifestation of the emotional burnout syndrome (EBS).

## Research methods

### Participants

The study involved 170 patients with HTN, stage II. The ambulatory BP monitoring (48-hours) revealed that 85 of them had HTN at work (the first group). This group comprised patients whose BP on working days was statistically higher than their BP on days off. The second group comprised 85 patients whose BP on working days and BP on days off were equal (essential HTN). The control group comprised 82 healthy subjects, equable with the patients in age and sex. Characteristics of the surveyed people are presented in table 1.

TABLE 1. CHARACTERISTICS OF PERSONS SURVEYED.

Index		<i>Patients with HTN at Work, n=85 Me±SD)</i>	<i>Patients with Essential HTN, n=85 (Me±SD)</i>	<i>Healthy subjects, n=82 (Me±SD)</i>
<i>Mean age, years</i>		44.7±4.3	47.4±4.5	44.9±3.1
<i>Sex</i>	<i>Male</i>	46 (54.1%)	42 (49.4%)	45 (54.9%)
	<i>Female</i>	39 (45.9%)	43 (50.6%)	37 (45.1%)

Note. Me – mean. SD – standard deviation.

There are no significant differences between groups in age and sex.

All the patients and healthy subjects that volunteered the experiment were to sign a model agreement of informed consent.

### Measures and procedure

Perfectionism was measured by the Russian version of Hewitt and Flett Multidimensional Perfectionism Scale (MPS) (Hewitt, & Flett, 1998; Gracheva, 2006), and the Perfectionism questionnaire compiled by Garanyan and Kholmogorova (Garanyan, & Yudeeva, 2009). Employment of both questionnaires aligned with different theoretical models provided more reliable and valid data on the structure of perfectionism as displayed by the participants.

EBS was measured by the Russian version of Maslach Burnout Inventory (MBI) (Maslach, Jackson, & Leiter, 1996; Vodopyanova, & Starchenkova, 2009).

The clinical and physiological part of the study was conducted on participatory terms with specialists of the Department of General medicine at the Moscow State University of Medicine and Dentistry, lead by Professor E.I. Sokolov and Professor O.D. Ostroumova.

Statistical analysis consisted of calculation of descriptive statistics and frequencies, significance testing with the Kruskal-Wallis H-Test, and calculation of the Spearman's rank correlation coefficient.

## Results

### *The results of perfectionism structure study in HTN patients and healthy subjects*

Investigation of the degree of manifestation and structure of perfectionism was conducted with the implication of Hewitt and Flett MPS and the Perfectionism questionnaire of Kholmogorova and Garanyan.

Analysis of the data obtained through MPS questionnaire demonstrated that HTN patients, and particularly patients with HTN at work, significantly differ from healthy subjects by higher indices of the composite score of perfectionism and socially prescribed perfectionism ( $p < 0.05$ ). Besides, patients of both groups differ from healthy subjects by higher indices of self-oriented perfectionism (see table 2).

TABLE 2. AVERAGE MEANS BY MPS SCALES FOR PATIENTS WITH HTN AND HEALTHY SUBJECTS (POINTS).

<i>MPS, Scales</i>	<i>Patients with HTN at Work, n=85 (Me±SD)</i>	<i>Patients with Essential HTN, n=85 (Me±SD)</i>	<i>Healthy subjects, n=82 (Me±SD)</i>
<i>Socially prescribed perfectionism</i>	76.6±3.96 <sup>a, d</sup>	67.2±4.22	60.7±8.99
<i>Others-oriented perfectionism</i>	62.1±4.27	59.8±3.25	57.1±6.27
<i>Self-oriented perfectionism</i>	61.5±3.63	63.6±5.11	57.0±7.22
<i>Composite score</i>	200.2±7.26 <sup>b, d</sup>	190.6±9.11 <sup>c</sup>	174.8±12.63

Note. Me – mean; SD – standard deviation.

a: differences between patients with HTN at work and healthy subjects are significant ( $p < 0.01$ );

b: differences between patients with HTN at work and healthy subjects are significant ( $p < 0.05$ );

c: differences between patients with essential HTN and healthy subjects are significant ( $p < 0.05$ );

d: differences between patients with HTN at work and essential HTN are significant ( $p < 0.05$ ).

In the structures of perfectionism for all three groups manifestations of ‘Socially prescribed perfectionism’ are dominating. At that patients with HTN at work differ from two other groups by greater disproportion in the structure of perfectionism: expected values by the scale of ‘Socially prescribed perfectionism’ significantly ( $p < 0.05$ ) higher than values by two other scales. For participants of other two groups such peculiarity does not reside in character. Analysis of mean square error reveals a minor data scattering for ‘Socially prescribed perfectionism’ index in the group. That is, practically for all the patients with HTN at work the level of socially prescribed perfectionism is equally high (see table 2).

HTN patients in general, and HTN at work patients in particular, scored higher in the socially prescribed perfectionism scale of the MPS questionnaire; therefore, those patients feel that the environment places top-heavy demands on them. It is essential, though, to earn approval and appreciation and avoid 'bad press'. This is the way we interpret high indices by the scale of 'socially prescribed perfectionism' (Hewitt, & Flett, 1998, 2002). Besides, these patients, when compared with healthy subjects, are distinguished by higher personal standards and inner motivation for self-development. They tend to set hard-hitting goals (including professional ones), directing towards 'best successful', and manifest willingness to spare no effort to their achievement. They are prone to self-criticism, they respect discipline, and exhibit mature self-control. These data are supported by high indices by the scale of 'Self-oriented perfectionism', according to Hewitt and Flett studies (Hewitt, & Flett, 1998, 2002). The group of healthy subjects, equable with the patients in age and sex, reveal the less pronounced features.

Data of the structure and intensity of perfectionism of the compared groups obtained through the Perfectionism questionnaire of Kholmogorova and Garanyan are represented in table 3.

TABLE 3. MEAN VALUES BY THE SCALES OF PERFECTIONISM FOR HTN PATIENTS AND HEALTHY SUBJECTS (KHOLMOGOROVA AND GARANYAN PERFECTIONISM QUESTIONNAIRE, POINTS).

<i>Perfectionism questionnaire of Kholmogorova and Garanyan, Scales</i>	<i>Patients with HTN at Work, n=85 (Me±SD)</i>	<i>Patients with Essential HTN, n=85 (Me±SD)</i>	<i>Healthy subjects, n=82 (Me±SD)</i>
<i>1. Apprehension of higher demands allegedly imposed by other people (constant competitive matching against other persons)</i>	17.6±3.6 <sup>a, d</sup>	14.3±5.2 <sup>c</sup>	10.1±3.5
<i>2. Overly raised self-aspirations and claims</i>	12.0±4.1	12.2±3.0	11.9±3.2
<i>3. High standards of activity along with commitment to the extreme of 'most successful'</i>	12.5±3.7 <sup>b</sup>	11.0±3.2	9.1±3.0
<i>4. Selectivity of information about one's own failures and fallacies</i>	8.9±2.3 <sup>a</sup>	8.1±2.7 <sup>c</sup>	5.0±2.2
<i>5. Polarized thinking- "all or nothing"</i>	9.0±3.4 <sup>b</sup>	7.43±3.1	7.1±3.6
<i>6. General index of perfectionism</i>	60.0±13.2 <sup>b</sup>	53.0±12.1 <sup>c</sup>	43.2±11.1

Note. Me – mean; SD – standard deviation.

a: differences between patients with HTN at work and healthy subjects are significant ( $p < 0.01$ );

b: differences between patients with HTN at work and healthy subjects are significant ( $p < 0.05$ );

c: differences between patients with essential HTN and healthy subjects are significant ( $p < 0.001$ );

d: differences between patients with HTN at work and essential HTN are significant ( $p < 0.05$ ).

Analysis of the data revealed that perfectionism indices of patients with HTN at work and essential HTN are significantly higher than those of healthy subjects.

HTN patients of both groups tend to percept other people as delegating high aspirations, while they are find themselves in constant competitive matching against others; they follow high standards of activity with commitment to the extreme of 'most successful', they profess unduly high self-claims and selectivity of the information on their own failures and fallacies. Patients with HTN at work, as compared to those with essential HTN, show higher indices of cognitive parameters of perfectionism: 'Apprehension of higher demands allegedly imposed by other people' and 'Polarized thinking' (table 3).

Moreover, data analysis leads to conclude a difference in the general shape of perfectionism profile for HTN patients of both groups and that of healthy subjects. According to Kholmogorova and Garanyan Perfectionism questionnaire data, the structure of perfectionism for HTN patients of both groups reveals predominance of the scale 'Apprehension of higher demands allegedly imposed by other people (constant competitive matching against other persons)', while healthy subjects indicate the factor of 'unduly high self-claims' as the most distinguished feature (table 3).

Accordingly, the data analysis brings us to the conclusion that HTN patients, and particularly patients with HTN at work, differ from healthy subjects by greater manifestation of all analyzed parameters of perfectionism. They show higher indices of composite scores of perfectionism and socially prescribed perfectionism (based on the data of the two questionnaires). Besides, HTN patients of both groups differ from healthy subjects in the general shape of the profile of perfectionism. Patients with HTN at work are distinguished by the most disharmonious profile of perfectionism.

### ***Results of EBS structure study in HTN patients and healthy subjects***

Results of MBI testing bring evidence of emotional burnout signs of mean and high level in both groups of HTN patients, which distinguish them from healthy people. Patients with HTN at work significantly ( $p < 0.05$ ) differ from healthy participants by higher indices for the scales of 'Emotional exhaustion' and 'Personal accomplishment'. At that patients with HTN at work significantly ( $p < 0.05$ ) differ from patients with essential HTN by higher indices for the scale of 'emotional exhaustion' (table 4).

Data analysis showed that most patients with HTN at work, who took part in our testing (59%), reveal high and mean level of EBS by all three MBI scales. The group of patients with essential HTN displayed higher indices by all three scales for 36% of participants. Mean and higher indices by all three ESB scales were revealed only for 9% of healthy subjects that took part in our testing.

Correlation analysis was applied to test the hypothesis of correspondence between indices of perfectionism and ESB parameters for HTN patients and healthy

subjects; to process the data we employed the calculation method of Spearman's rank correlation coefficient ( $r_s$ ).

TABLE 4. AVERAGE MEANS BY MBI SCALES FOR HTN PATIENTS AND HEALTHY SUBJECTS (POINTS).

<i>EBS factors (MBI scales)</i>	<i>Patients with HTN at Work, n=85 (Me±SD)</i>	<i>Patients with Essential HTN, n=85 (Me±SD)</i>	<i>Healthy subjects, n=82 (Me±SD)</i>
<i>Emotional exhaustion</i>	27.5±3.67 <sup>a, c</sup>	24,6±4.3	20.1±5.7
<i>Depersonalization/ Cynicism</i>	11.2±2.1 <sup>c</sup>	9.5±1.9	7.6±2.1
<i>Personal accomplishment</i>	30.0±3.5	29.0±2.6 <sup>b</sup>	35.2±4.9

Note. Me – mean; SD – standard deviation.

a: differences between patients with HTN at work and healthy subjects are significant ( $p < 0.05$ );

b: differences between patients with essential HTN and healthy subjects are significant ( $p < 0.05$ );

c: differences between patients with HTN at work and those with essential HTN are significant ( $p < 0.05$ ).

### **Results of the study of correlation between perfectionism and EBS for HTN patients and healthy subjects**

The data presented in table 5 testify to statistically significant correlations between indices of 'Self-oriented perfectionism' (MPS) and 'Emotional exhaustion' (MBI) exhibited by healthy subjects. There were significant correlations as well between 'Self-oriented perfectionism' (MPS) and 'Depersonalization/ Cynicism' (MBI). Total scores for perfectionism by MPS statistically correlate with indices by MBI. The factor of 'Personal accomplishment' (MBI) correlates with indices for 'Socially prescribed perfectionism' by MPS ( $p < 0.001$ ). Inter-correlations between MBI scales and the factor of 'Others-oriented perfectionism' appear statistically weak (table 5).

TABLE 5. SPEARMAN'S CORRELATIONS BETWEEN MBI AND MPS SCALES FOR HEALTHY SUBJECTS.

<i>MPS, Scales</i>	<i>MBI, Scales</i>		
	<i>Emotional Exhaustion</i>	<i>Depersonalization/ Cynicism</i>	<i>Personal accomplishment</i>
<i>Socially prescribed perfectionism</i>	.108	.174	.221 <sup>***</sup>
<i>Others-oriented perfectionism</i>	.139	.123	.193
<i>Self-oriented perfectionism</i>	.368 <sup>***</sup>	.287 <sup>**</sup>	.099
<i>Composite score</i>	.303 <sup>**</sup>	.235 <sup>*</sup>	.199

Note. \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

The analysis displayed statistically significant correlations between intensity of EBS, exhibited by healthy participants, and the following parameters of Kholmogorova and Garanyan questionnaire: 'Overly raised self-aspirations and claims', 'High standards of activity along with commitment to the extreme of 'most successful', and scores of the General index of perfectionism. Such factors as 'Selectivity of information about one's own failures and fallacies' and 'Polarized thinking' appear negligible for development of EBS in healthy people (table 6).

TABLE 6. SPEARMAN'S CORRELATIONS BETWEEN MBI SCALES AND SCALES OF KHOLMOGOROVA AND GARANYAN PERFECTIONISM QUESTIONNAIRE FOR HEALTHY SUBJECTS.

<i>Perfectionism questionnaire of Kholmogorova and Garanyan, Scales</i>	<i>MBI, Scales</i>		
	<i>Emotional Exhaustion</i>	<i>Depersonalization/Cynicism</i>	<i>Personal accomplishment</i>
<i>1. Apprehension of higher demands allegedly imposed by other people</i>	.116	.270**	.208
<i>2. Overly raised self-aspirations and claims</i>	.307**	.424***	.201
<i>3. High standards of activity along with commitment to the extreme of 'most successful'</i>	.231**	.205	.274***
<i>4. Selectivity of information about one's own failures and fallacies</i>	.183	.129	.096
<i>5. Polarized thinking</i>	.139	.116	.101
<i>6. General index of perfectionism</i>	.296**	.318**	.179

Note: \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

HTN patients of both groups also exhibited statistically significant correlations between intensity of burnout syndrome and indices of both questionnaires for perfectionism. But the two groups of HTN patients, unlike healthy participants, reveal weak correlations between EBS and 'Self-oriented perfectionism' by MPS and similar indices by Kholmogorova and Garanyan questionnaire. Patients with HTN at work manifest correlations between MBI parameters and 'Socially prescribed perfectionism' by MPS, as well as indices of other scales: 'Apprehension of higher demands allegedly imposed by other people' and 'High standards of activity along with commitment to the extreme of 'most successful' by Kholmogorova and Garanyan questionnaire (tables 7 and 8).

As for the patients with essential HTN, their MBI indices statistically correlate with "Socially prescribed perfectionism" (by MPS), on the one hand, and 'Apprehension of higher demands allegedly imposed by other people' and 'Selectivity of information about one's own failures and fallacies' from Kholmogorova and Garanyan questionnaire, on the other (see tables 9 and 10).

TABLE 7. SPEARMAN'S CORRELATIONS BETWEEN MBI AND MPS SCALES FOR PATIENTS WITH HTN AT WORK.

<i>MPS, Scales</i>	<i>MBI, Scales</i>		
	<i>Emotional Exhaustion</i>	<i>Depersonalization/ Cynicism</i>	<i>Personal accomplishment</i>
<i>Socially prescribed perfectionism</i>	.426***	.291**	.206
<i>Others-oriented perfectionism</i>	.123	.167	.190
<i>Self-oriented perfectionism</i>	.194	.209	.264**
<i>Composite score</i>	.279***	.233***	.218***

Note. \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

TABLE 8. SPEARMAN'S CORRELATIONS BETWEEN MBI SCALES AND SCALES OF KHOLMOGOROVA AND GARANYAN PERFECTIONISM QUESTIONNAIRE FOR PATIENTS WITH HTN AT WORK.

<i>Perfectionism questionnaire of Kholmogorova and Garanyan, Scales</i>	<i>MBI, Scales</i>		
	<i>Emotional Exhaustion</i>	<i>Depersonalization/ Cynicism</i>	<i>Personal accomplishment</i>
<i>1. Apprehension of higher demands allegedly imposed by other people</i>	.219*	.368***	.301**
<i>2. Overly raised self-aspirations and claims</i>	.125	.194	.205
<i>3. High standards of activity along with commitment to the extreme of 'most successful'</i>	.271**	.162	.355***
<i>4. Selectivity of information about one's own failures and fallacies</i>	.159	.268*	.095
<i>5. Polarized thinking</i>	.123	.099	.162
<i>6. General index of perfectionism</i>	.227*	.298**	.203

Note: \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

TABLE 9. SPEARMAN'S CORRELATIONS BETWEEN MBI AND MPS SCALES FOR PATIENTS WITH ESSENTIAL HTN.

<i>MPS, Scales</i>	<i>MBI, Scales</i>		
	<i>Emotional Exhaustion</i>	<i>Depersonalization/ Cynicism</i>	<i>Personal accomplishment</i>
<i>Socially prescribed perfectionism</i>	.289**	.208	.246*
<i>Others-oriented perfectionism</i>	.178	.174	.301**
<i>Self-oriented perfectionism</i>	.142	.198	.161
<i>Composite score</i>	.221*	.201	.279*

Note: \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

TABLE 10. SPEARMAN'S CORRELATIONS BETWEEN MBI SCALES AND SCALES OF Kholmogorova AND GARANYAN PERFECTIONISM QUESTIONNAIRE FOR PATIENTS WITH ESSENTIAL HTN.

<i>Perfectionism questionnaire of Kholmogorova and Garanyan, Scales</i>	<i>MBI, Scales</i>		
	<i>Emotional Exhaustion</i>	<i>Depersonalization/Cynicism</i>	<i>Personal accomplishment</i>
1. <i>Apprehension of higher demands allegedly imposed by other people</i>	.263*	.345**	.216
2. <i>Overly raised self-aspirations and claims</i>	.203	.297**	.199
3. <i>High standards of activity along with commitment to the extreme of 'most successful'</i>	.118	.200	.167
4. <i>Selectivity of information about one's own failures and fallacies</i>	.268*	.133	.294**
5. <i>Polarized thinking</i>	.108	.164	.112
6. <i>General index of perfectionism</i>	.221*	.295**	.217

Note: \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

Moreover, it is important to note that HTN patients of both groups, as well as healthy subjects, reveal statistically significant correlations between MBI indices and the General Index of perfectionism (Kholmogorova and Garanyan questionnaire), and Composite score (MPS) (Tables 5-10).

## Discussion

The article brings forward results of comparative analysis of perfectionism indices for patients with HTN at work, patients with essential HTN and healthy subjects.

We succeeded to show that HTN patients in general and patients with HTN at work in particular, are distinguished by higher degree of intensity of such personality feature as perfectionism. The structure of perfectionism of HTN patients reveals significantly higher intensity of 'Socially prescribed perfectionism' factor. Perfectionism structure displayed by patients with HTN at work appears as most disharmonious. We succeeded to bring forward a correlation between perfectionism indices and intensity of EBS for the presented groups of participants. The study reveals that 'Socially prescribed perfectionism' factor appears in close correlation with EBS parameters in both groups of HTN patients. While healthy subjects manifest more significant correlation between EBS and 'Self-oriented perfectionism'. The factor of 'Polarized thinking' exhibits almost negligible correlation with EBS in all groups of participants.

Thus, the obtained data appear to prove the inherent tendency of HTN patients, and particularly patients with HTN at work, for high motivation of accomplishment (their orientation toward 'the most successful'). It comes in combination with their firm conviction of unduly high expectations from social environment. All this eventually leads to apprehensions of falling below other people's aspirations. We believe that these peculiarities appear as a notable constituent of the intrapersonal conflict of the patients, when strongly pronounced motives of 'need for achievement' and 'avoidance of failure' coexist side by side.

Analysis of the data of diagnostic interviewing of these patients revealed that the loss of meaning in professional activity may come as a crucial factor that brings down 'Personal accomplishment', which considerably contributes to formation of emotional burnout syndrome in the group of HTN patients. The loss of meaning in professional activity may be caused by impeded realization of life aspirations, such as 'high social status' or 'esteem of one's family'. It was demonstrated that signs and symptoms of EBS would surface in the foremost during age crises. The group of respondents that exhibited clear signs of neurotic perfectionism would demonstrate a poignant reaction to the topic of 'class distinctions', 'social justice', the state of their scope for promotion, opportunities of 'social realization' and social security. The data received mostly agree with results obtained by other scientists that contributed to investigation of the subject matter (Appleton, Hall, & Hill, 2009; Tashman, Tenenbaum, & Eklund, 2010). One of the principal tasks of the present study was to answer the question whether perfectionism (as a personality factor) shares responsibility for the formation of EBS in HTN patients. It also sought to understand if perfectionism may come as a significant factor in development of HTN at work.

We obtained results, which prove that the group of patients with HTN at work reveals higher indices of perfectionism as compared with the patients with essential HTN. The group of patients with HTN at work and distinct symptoms of EBS showed the highest indices of perfectionism in our study. Correlation analysis, processing and interpretation of the data lead us to a valid conclusion of the closer interrelation between perfectionism, and particularly 'Socially prescribed perfectionism factor', and EBS parameters in the group of patients with HTN at work as compared with those with essential HTN.

But the question is whether we can assume that perfectionism comes out as a personality feature which predisposes development of EBS in patients with HTN at work.

A positive answer to this question is supported by qualitative interpretation of the obtained results. Perfectionism as it is, appears to be a more stable formation than EBS, since perfectionism is a personality feature (Hewitt, & Flett, 2002; Garanyan, & Yudeeva, 2009; Rice, Ashby, & Gilman, 2011; *et al.*). EBS is generally believed to be a mental state, hence a dynamic phenomenon (Maslach, Schaufeli, & Leiter, 2001; Bianchi, Boffy, Hingray, Truchot, & Laurent, 2013).

Consequently, the content analysis makes evident a suggestion that perfectionism will call forth the development of EBS, rather than the other way round.

However, a well-grounded answer to the question of predispositional character of perfectionism for EBS development in cases of HTN at work is the matter of a prospective longitudinal study. This may appear as a perspective of our future research in the field.

Results obtained in the present study afforded ground for taking off a 'risk group' among the HTN patients that exhibited derangements in 'emotional well-being', and formulation of psychological recommendations.

Presented results do not only broaden essential scientific understanding of emotional burnout syndrome and psychological mechanisms of psychosomatic genesis of the syndrome in HTN patients. They inspire new issues crucial for scientific studies in clinical psychology. These are primarily the issues of methodological grounds and methodical provision of psychological studies (Veraksa, Gorovaya, Leonov, Pashenko, & Fedorov, 2012; Galazhinsky, & Klochko, 2012; Pöppel, & Wagner, 2012; Shilko, Dormashev, & Romanov, 2013; Mezzich, Zinchenko, Krasnov, Pervichko, & Kulygina, 2013; Pervichko, Zinchenko, & Martynov, 2013).

In the matter of general theory the issues gain special urgency within the present context of scientific knowledge, when adoption of ideals and principles of the post-non-classical model of rationality earns a rapidly increasing influence. The post-non-classical model of rationality professes a new approach in scientific endeavors, an approach, when a human being and mental structures are regarded as open self-developing system (Styopin, 2003; Zinchenko, & Pervichko, 2012, 2014; Zinchenko, Pervichko, & Martynov, 2013).

## Conclusions

1. HTN patients, and particularly patients with HTN at work, are distinguished from healthy subjects by stronger manifestation of such a personality feature as 'perfectionism'. The general shape of the profile of perfectionism for HTN patients of both groups differ from the one of healthy subjects. Perfectionism structure of HTN patients of both groups reveals predominance of the factor of 'Apprehension of higher demands allegedly imposed by other people (constant competitive matching against other persons)'. Healthy subjects, however, display a prevailing factor of 'Overly raised self-claims and pretensions'.

2. Perfectionism structure for patients with HTN at work is distinguished by a marked disharmony, as compared with healthy subjects and patients with essential HTN. They display 'Socially prescribed perfectionism' index as significantly prevailing against other indices. Moreover, perfectionism structure of patients with HTN at work reveals significantly higher indices for cognitive parameters of

perfectionism: ‘Apprehension of higher demands allegedly imposed by other people (constant competitive matching against other persons)’, ‘Selectivity of information on one’s own failures and fallacies’ and ‘Polarized thinking’.

3. A correlation was revealed between perfectionism indices and intensity of EBS for the presented groups of participants. General indices of perfectionism correlate with EBS parameters in the whole cohort of respondents. ‘Socially prescribed perfectionism’ appears to be closely related to EBS parameters in the two groups of HTN patients, though patients with HTN at work reveal higher indices of correlation, if compared with essential HTN. The factor of ‘Polarized thinking’ does not show any correlation with EBS parameters in all groups of participants.

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