Personal Factors of Emotional Burnout in Patients with “Hypertension at Work”

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Abstract

The primary aim of this research was to indicate the emotional burnout syndrome (EBS), define its intensity and quality characteristics in patients with Hypertension (HTN) at work; to study the role of such a personal factor as perfectionism and psychological defense mechanisms in development of EBS in HTN patients. We tested 85 patients with HTN at Work and 85 patients with Essential HTN. The research showed that EBS factors are presented in both groups of HTN patients. All examined HTN patients demonstrated a low self-esteem in terms of personal accomplishment. Patients with HTN at Work distinguish from patients with Essential HTN by more intense EBS factors, such as “emotional exhaustion” and “depersonalization”. The results illustrated that HTN patients and patients with HTN at Work in particular distinguish by high intensity of socially prescribed perfectionism and representation of defense mechanisms including displacement, denial, projection and reaction formation. The correlation analysis showed positive significant correlations between these factors and intensity of emotional exhaustion and depersonalization within EBS.

Keywords: Hypertension at work, Emotional burnout syndrome, Type D personality, Perfectionism, Psychological defense mechanisms

1. Problem statement and motivation

Arterial hypertension (AH) is one of the most common diseases of the cardiovascular system, and it continues to be one of the basic problems of modern medicine and clinical psychology. Today scientists discover more and more patients whose blood pressure (BP) values during work appear to be higher than those values during free time. This form of arterial hypertension (AH) is called “hypertension at work” [1]. HTN at work is considered to be a form of "stress-induced hypertension" [2]. According to J. Stork et al, AH during working time was diagnosed in 19% patients with normal BP during periodical ambulatory monitoring [1]. We assume that this is mostly related to those, who work under emotional stress.
Among the psychological factors promoting the development of HTN at work are a suppressed tendency to become irritated, being unsatisfied with career possibilities, and having high professional standards but a low level of freedom in decision-making processes [2], [3], [4]. Studies of emotional personality characteristics of “HTN at Work” patients indicated that they usually experience negative emotions in more prolonged and excessive way with a tendency not to express them openly due to the fear of being rejected by others [5], [6], [7]. In general, this corresponds to emotional characteristics of “type D personality” (“distressed personality”) [6], [8], [9].

These findings argue the importance of investigation of such a psychological phenomenon as an emotional burnout syndrome (EBS) in patients with HTN at work.

2. Research objective

The primary aim of this research is to indicate the EBS, define its intensity and quality characteristics in patients with HTN at work; to study the role of such a personal factor as perfectionism and psychological defense mechanisms in development of EBS in HTN patients.

3. Research methods

3.1. Participants

The study involved 170 patients with AH, 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). Characteristics of the patients surveyed are presented in Table 1.

Table 1. Characteristics of patients surveyed

<table>
<thead>
<tr>
<th>Index</th>
<th>Patients with HTN at work (n=85)</th>
<th>Patients with Essential HTN (n=85)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean age, years</td>
<td>44.7±4.3</td>
<td>47.4±4.5</td>
</tr>
<tr>
<td>Sex</td>
<td>Male 46 (54.1%)</td>
<td>42 (49.4%)</td>
</tr>
<tr>
<td></td>
<td>Female 39 (45.9%)</td>
<td>43 (50.6%)</td>
</tr>
</tbody>
</table>

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

3.2. Measures and procedure

EBS was measured by Russian version of “Maslach Burnout Inventory (MBI)” [10, 11]. Perfectionism was measured by Russian version of multi-dimensional scale of Perfectionism by Hewitt and Flett (MPS) [12, 13]. Psychological defense mechanisms were evaluated by the survey “The Life Style Index” [14, 15].

Statistical processing of the data was conducted using various methods: calculating mean values and the average error mean; calculating the certainty of distinctions between samples based on indicators of the probability of distinctions between indicators (Student \(t\)-criterion); and showing the correlations among investigated features in groups of participants, employing the method of calculating Spierman indices of cograduation (\(r\)).
4. Results

4.1. The results of EBS structure study in HTN patients.

MBI results analysis showed that HTN patients in both groups had EBS signs. Patients with HTN at Work significantly (p<0.05) differs from patients with essential HTN in higher scores of scales “emotional exhaustion” and “depersonalization”, meanwhile they showed lower score of “personal accomplishment” scale (Table 2). Further analysis demonstrated that most of the patients with HTN at Work who attended out study had high and medium intensity of EBS by all MBI scales, that’s not typical for patients with essential HTN in general.

Table 2. Average means by MBI scales in HTN patients and healthy subjects (points).

<table>
<thead>
<tr>
<th>EBS factors</th>
<th>Patients with HTN at Work, n=85</th>
<th>Patients with Essential HTN, n=85</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Exhaustion</td>
<td>27.5±3.67</td>
<td>24.55±4.25</td>
</tr>
<tr>
<td>Depersonalization/cynicism</td>
<td>11.20±2.05*</td>
<td>9.50±1.95</td>
</tr>
<tr>
<td>Personal accomplishment</td>
<td>30.0±3.53</td>
<td>28.99±2.63</td>
</tr>
</tbody>
</table>

* The differences between the groups are reliable (p <0.05).

Gender analysis suggested that female patients demonstrate significantly (p<0.05) higher level of “emotional exhaustion” and “depersonalization” scales; males have higher level of “reduction of personal achievements”. Meanwhile there are no significant differences in “emotional exhaustion” and “depersonalization” between female patients with HTN at Work and Essential HTN. While male patients with HTN at Work significantly (p<0.05) differs in mentioned scales from male patients with Essential HTN. It’s shown that both groups of males demonstrated lower level of “personal accomplishment” scale in comparison with females. This suggested that male patients with HTN experienced the reduction of personal achievements more intensively (Table 3).

Table 3. Intensity of EBS factors according to MBI in HTN patients.

<table>
<thead>
<tr>
<th>EBS factors</th>
<th>HTN at Work</th>
<th>HTN at Work</th>
<th>Essential HTN</th>
<th>Essential HTN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>females, n=39</td>
<td>males, n=46</td>
<td>females, n=43</td>
<td>males, n=42</td>
</tr>
<tr>
<td>Emotional Exhaustion</td>
<td>28.6±3.67*</td>
<td>25.4±3.67*</td>
<td>28.3±3.67*</td>
<td>20.8±3.67*</td>
</tr>
<tr>
<td>Depersonalization/cynicism</td>
<td>13.26±2.05*</td>
<td>9.15±2.05*</td>
<td>11.8±1.95*</td>
<td>7.2±1.95*</td>
</tr>
<tr>
<td>Personal accomplishment</td>
<td>31.7±3.67*</td>
<td>28.3±3.67*</td>
<td>30.97±3.67*</td>
<td>27.0±3.67*</td>
</tr>
</tbody>
</table>

* The differences between male and female groups are reliable (p <0.05).

Thus, the research showed that EBS signs were found in both experimental groups. All examined patients with HTN have low self-esteem in terms of personal accomplishment. Male patients with HTN, in general, see themselves as less successful professionally than females. Female patients with HTN are more incurred to emotional exhaustion in comparison with males. Meanwhile most of the patients with HTN at Work (compared to Essential HTN) demonstrate medium and high intensity of EBS. Patients with HTN at Work distinguish by intense emotional exhaustion and high level of “depersonalization” scale.

4.2. The results of perfectionism structure study in HTN patients.

The study of intensity and quality characteristics of perfectionism in HTN patients showed, that both groups of patients have a high scores in “socially prescribed perfectionism” scale and relatively less scores in scales “other-oriented perfectionism” and “self-oriented perfectionism” (Table 4).
The correlation analysis showed that in both groups of HTN patients there are a significant (p<0.001) correlations between high scores in MBI scales “emotional exhaustion”, “depersonalization” and high scores in MPS scale “socially prescribed perfectionism (SPP).

This characterizes patients with HTN at Work as well as patients with Essential HTN. Herewith patients with HTN at work have 76.6±3.96 scores, patients with Essential HTN have 67.2±4.22 scores (Table 4).

This result gives us a reason to argue that patients with HTN have a certain belief that social environment put them in excessive demands. Nevertheless, setting life and professional objectives they still tend to focus on pole of “most successful” ones. Patients with HTN at Work and male patients these characteristics are significantly (p<0.05) pronounced.

Summarizing, research showed that HTN patients overall are characterized by high intensity of such a personal factor as perfectionism (socially prescribed perfectionism in particular). SPP demonstrates a reliable association with intensity of the following aspect of EBS: “emotional exhaustion” and “depersonalization”.

4.3. The results of psychological defense mechanisms study in HTN patients.

The analysis of defense mechanisms of HTN patients showed the dominance of low level psychological defenses.

The most common mechanisms were denial, projection and regression. More mature defense processes included reaction formation and rationalization. Comparative analysis of 2 groups showed that patients with HTN at Work significantly (p<0.05) differs from control group by more frequent representation of displacement, denial, projection and reaction formation (Table 5).

Table 5. Average means by Life Style Index scales in Patients with HTN (%)

<table>
<thead>
<tr>
<th>Scales</th>
<th>Patients with HTN at Work, n=85</th>
<th>Patients with Essential HTN, n=85</th>
</tr>
</thead>
<tbody>
<tr>
<td>Displacement</td>
<td>35.8</td>
<td>26.7</td>
</tr>
<tr>
<td>Regression</td>
<td>13.6*</td>
<td>25.3</td>
</tr>
<tr>
<td>Replacement</td>
<td>9.2</td>
<td>8.3</td>
</tr>
<tr>
<td>Denial</td>
<td>40.9*</td>
<td>27.3</td>
</tr>
<tr>
<td>Projection</td>
<td>40.8</td>
<td>41.6</td>
</tr>
<tr>
<td>Compensation</td>
<td>15.8</td>
<td>16.7</td>
</tr>
<tr>
<td>Reaction formation</td>
<td>38.3*</td>
<td>11.7</td>
</tr>
<tr>
<td>Rationalization</td>
<td>47.9*</td>
<td>28.9</td>
</tr>
</tbody>
</table>

* The differences between the groups are reliable (p<0.05).

There was a significant (p<0.01) correlation between high representation of such defense mechanisms as denial, projection, reaction formation and high scores in all MBI scales (Table 6).
Table 6. Significant correlations (r) between MBI and MPS scales (p<0.01)

<table>
<thead>
<tr>
<th>Scales</th>
<th>Denial</th>
<th>Projection</th>
<th>Reaction formation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Exhaustion (MBI)</td>
<td>r = 0.643</td>
<td></td>
<td>r = 0.533</td>
</tr>
<tr>
<td>Depersonalization (MBI)</td>
<td>r = 0.519</td>
<td>r = 0.73</td>
<td>r = 0.626</td>
</tr>
<tr>
<td>Personal accomplishment (MBI)</td>
<td>r = 0.541</td>
<td>r = 0.541</td>
<td>r = 0.559</td>
</tr>
</tbody>
</table>

Female patients with HTN demonstrated quite high representation of denial and projection, meanwhile male patients preferred reaction formation.

Comprehensive interpretation of our findings suggested that affection of HTN patients (specifically HTN at Work) can be characterized by dominance of negative emotions and aggressive tendencies which would be projected, denied or suppressed. Such a complex of defense mechanisms is typical for those, who knows, based on own experience, that uncontrolled negative emotional reactions could be unsafe in social environment [14].

5. Conclusions

The research showed that EBS factors are presented in both groups of HTN patients. All examined HTN patients demonstrated a low self-esteem in terms of personal accomplishment. Male patients with HTN, in general, see themselves as less successful professionally than females. Female patients with HTN are more incurred to emotional exhaustion in comparison with males. Patients with HTN at Work distinguish from patients with Essential HTN by more intense EBS factors, such as “emotional exhaustion” and “depersonalization”.

One of the most important objectives of our research was to study the impact of personal factors such as perfectionism and intensity of psychological defense mechanisms within EBS development in HTN patients.

The results illustrated that HTN patients who attended our research (and patients with HTN at Work in particular) distinguish by high intensity of socially prescribed perfectionism and representation of defense mechanisms including displacement, denial, projection and reaction formation. The correlation analysis showed positive significant correlations between these factors and intensity of emotional exhaustion and depersonalization within EBS.

Thus, our findings prove that patients have a high motivation to achievements (focusing on pole of “the most successful ones”) combined with certain belief that social environment put them in excessive demands. All these patterns lead to a fear of not meet the expectations of others. In our opinion, these characteristics are an important part of interpersonal conflict of these patients. The results showed that these characteristics are more intense in male patients with HTN. Delivered results can be considered as an explanatory principle for psychological interpretation of tendency typical for HTN patients to suppress such emotional experiences as uncertainty, anxiety, and aggression.

The analysis of diagnostic interview showed, that one of the most important factors, which decreases personal efficiency, for EBS development in HTN patients is losing the meaning of professional work. This is caused by inability to actualize life expectations such as “high social status” and “respect by relatives”.

It was shown, that EBS symptoms are more intense during age crises. Respondents with high level of perfectionism (neurotic one) were extremely sensitive to such topics as “class differences”, “social justice”, career perspectives, possibilities of social realization and social safety. Our findings can be considered as a basis to define a “risk group” amongst HTN patients by an attribute of “emotional well-being” disorder and to develop psychological recommendations for them.

The research results expand the scientific views on emotional burnout syndrome and psychological mechanisms of psychosomatic syndrome genesis. Moreover, our findings set new questions which are important for scientific researches design in clinical psychology today; in particular, the question of psychological studies methodology in interdisciplinary clinical-and-psychological researches. In generic theoretical area, these issues
are becoming extremely important on the modern stage of science development due to its shift to postnonclassical model of recognizing the object – personality and psyche - as complex, self-developing systems [16, 17, 18, 19].

References


