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Depressive, anxious and somatization symptoms and quality of life in stress-related disorders

Depresivni, anksiozni i somatizacioni simptomi i kvalitet života u poremećajima povezanim sa stresom

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Abstract

Background/Aim. Recent studies have shown a significant relation of the post-traumatic stress disorder and impairment of quality of life. The research on the relations of other stress-related disorders and quality of life is scarce. The aim of this research was to determine which symptoms within the stress-related disorders (depressive, anxious and somatization) have the strongest effect on the quality of life decrease. **Methods**. The study group comprised 80 subjects who have developed a certain stress-related disorder. The diagnosis was made based on the International Classification of Diseases (ICD-10) criteria. Manchester Short Assessment Quality of Life Scale (MANSA) and Symptom Check List-90 Revised (SCL-90-R) were administered. **Results.** The presence of all three types of symptoms (depressive, anxious or somatization) was in negative correlation with the quality of life, contributing to the variation of quality of life with 40%. Depressive symptoms had the greatest impact on the quality of life impairment. **Conclusion.** When it comes to stress-related disorders, the quality of life is mostly impaired by depressive symptoms. Target therapeutic interventions aimed at depressive symptoms might have a significant effect on the quality of life improvement in the person who developed stress-related disorders.

Key words:
stress, psychological; quality of life; surveys and questionnaires; stress disorders, post-traumatic; depression; neurotic disorders; somatoform disorders.

Apstrakt

Uvod/Cilj. Skorašnje studije pokazale su značajnu povezanost posttraumatskog stresnog poremećaja i smanjenja kvaliteta života. Istraživanja o korelaciji drugih poremećaja povezanih sa stresom i kvaliteta života izuzetno su retka. Cilj ovog istraživanja bio je da se utvrdi koji simptomi u okviru poremećaja povezanih sa stresom (depresivni, anksiozni i somatizacioni) najviše utiču na smanjenje kvaliteta života. **Metode.** Studijska grupa sastojala se od 80 ispitanika koji su razvili neki od poremećaja povezanih sa stresom. Dijagnoza je postavljena na osnovu kriterijuma Međunarodne klasifikacije bolesti (MKB-10). Primenjeni su sledeći instrumenti: Mančesterska kratka skala za procenu kvaliteta života (*Manchester Short Assessment Quality of Life Scale* – MANSA) i revidirana lista simptoma (*Symptom Check List-90 Revised* – SCL-90-R) **Rezultati.** Prisustvo sve tri grupe simptoma (depresivni, anksiozni i somatizacioni) bilo je u negativnoj korelaciji sa kvalitetom života, doprinoseći varijaciji kvaliteta života sa 40%. Depresivni simptomi imali su najveći uticaj na smanjenje kvaliteta života. **Zaključak.** Depresivni simptomi kao deo poremećaja povezanih sa stresom najviše utiču na smanjenje kvaliteta života. Ciljane terapijske intervencije usmerene na depresivne simptome mogle bi imati značajan uticaj na poboljšanje kvaliteta života kod osoba koje su razvile neki od poremećaja povezanih sa stresom.

Ključne reči:
stres, psihički; kvalitet života; ankete i upitnici; stresni poremećaji, posttraumatski; depresija; neurotski poremećaji; psihofiziološki poremećaji.

Introduction

Stress-related disorders always appear as a direct consequence of an acute severe stress or of continuous trauma, i.e. they represent a maladaptive response to a severe or continuous stress. It is necessary to emphasize that the stress or continuous trauma are primary etiological factors, i.e. that the disorder would not develop in their absence [1]. According

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to the Tenth Revision of the International Classification of Diseases and Related Health Problems (ICD-10) [1], stress-related disorders are the disorders that are identified not only by their symptoms and course but also based on one of two causing effects – extremely stressful life events or significant life changes.

The above-mentioned criteria are met by the diagnostic category F 43 (Reaction to severe stress and adjustment disorders) which includes: F 43.0 (Acute stress reaction), F 43.1 (Post-traumatic stress disorder – PTSD), and F 43.2 (Adjustment disorders). Apart from these diagnoses, one more diagnostic category meets the above-mentioned criteria – F 62.1 (Enduring personality changes after catastrophic experience) [1].

During the past two decades, the prevalence of the stress-related disorders significantly increased in our country due to numerous stressful factors [2–5]. Some recent studies have shown a significant relationship between PTSD and the decrease in quality of life (QOL) [6], which we have also shown in our previous research [7]. Studies on the relationship between other stress-related disorders and QOL are rather scarce. Studies on adjustment disorders are mostly done in populations of somatic patients, and their results show that the QOL is significantly lower in those who develop these disorders rather than those who suffer from the somatic disease alone [8].

The QOL as a concept became significant with the emergence of an idea that the impact of the disease was not limited only to symptoms and signs, but also to the global subjective impression of one's health. Therefore, the QOL may be considered as an operational measure of the overall health and welfare [9]. According to the definition of the World Health Organization, the QOL is defined as "individuals' perception of their position in life in relation to their goals and in the context of value systems, incorporated in their decision making" [10]. This definition primarily emphasizes the significance of the individual's readiness and capacity to communicate and participate in the personal QOL assessment.

Mental disorders have a significant impact on the life of an individual. Apart from the symptoms of a disorder, the following are present: changes in functionality and in access to the resources and possibilities, the subjective sense of welfare, burden on the family, and sometimes endangered safety of the society. Due to a wide range of the relevant consequences, and the prevailing opinion that the assessment should include patient's perspective as well, the increased attention has been directed to the development of the measures and procedures for the assessment of their QOL [11, 12].

Clinical experience suggests that specific forms of disorders from the stress-related group can have various impacts on patients' QOL [13, 14], affecting physical as well as mental health [15]. Patients may have difficulties in work or in relationships with others, as well as problems in leisure activities due to cognitive symptoms of fear, worry, and obsessions, they may be upset due to symptoms of increased irritability that are present in PTSD, or can be limited by avoidance symptoms that are inherent to this group of disorders. The researchers have only recently started to examine this topic in a more comprehensive and sophisticated way, using various approaches on different samples [16].

The studies which were not focused on stress-related disorders have shown the influence of anxious and depressive symptoms on the reduction of QOL [17–19], with the notion that depressive symptoms lead to a decrease in quality of life significantly more compared to the anxious symptoms [20]. Furthermore, it has been shown that in PTSD patients who had depressive comorbidity, the QOL decreased to the most significant extent [21]. Studies focusing on QOL in somatic illnesses showed that it decreases significantly if patients develop depression [22, 23].

In our previous study [7], we showed that persons in whom some stress related disorders were diagnosed had a significantly lower QOL compared to persons who experienced stress but did not develop a disorder.

The aim of our study was to determine which type of symptoms within the group of stress-related disorders (depressive, anxious, and somatization symptoms) has the strongest impact on the decrease of the QOL. By defining the type of symptoms that are the most important for the decrease of the QOL, a more directed treatment and prevention of disorders from this group could be achieved, thus improving the QOL of patients.

Methods

Sample

The sample comprised 80 subjects who were recruited during the period from 2002 to 2005. It included patients from a University Psychiatric Clinic who developed some of the stress-related disorders after a stressful life event. This group comprised 31 men (38.75%) and 49 women (61.25%), with average age 42.16 years [standard deviation (SD) = 11.56], ranging from 18 to 68 years. This sample of 80 subjects was the study group described in our aforementioned research [7], for which we have shown significantly greater impairment of quality of life for these 80 subjects, in comparison to the control group (80 subjects who experienced a stressful life event but did not develop a stress-related disorder). The total score of the QoL (measured by Manchester Short Assessment Quality of Life Scale – MANSA) [24] in the study group was 42.99 ± 9.5, while the same score in the control group was 53.01 ± 8.23 ($p < 0.01$) [7].

The diagnosis was based on clinical psychiatric interview and was made according to ICD-10 criteria [1]. The sample did not include patients with the accompanying psychiatric comorbidity. All subjects experienced a traumatic or stressful life event that led to the development of the disorder (acute stress reaction, PTSD, adjustment disorder and enduring personality change after a catastrophic experience); none of them had received any psychiatric treatment. All subjects were given the explanation about the aims of the study and have signed the Informed Consent Form. The confidentiality of obtained results was preserved. The study was approved by the Ethical Committee and was carried out according to the good research practice of the Faculty of Medicine in Belgrade.

Instruments

The following questionnaires were administered to all the subjects: MANSA [24] and Symptom Check List-90 Revised (SCL- 90-R) [25].

MANSA [24] is a short scale which assesses the general level of the QOL often used for evaluation of mental health, and it consists of three parts. The first part includes general data (date of birth, gender, ethnic background, and the diagnosis of disorder). The second part includes nine questions related to education, employment, finances, state support, dwelling conditions, the number of children and number of individuals within the family community person lives in. The third part (the satisfaction scale) measures a subjective satisfaction with the quality of different aspects of life, as well as the QOL as a whole. It consists of sixteen items, four of which are considered as "objective" while the remaining twelve are considered as "subjective" assessment of satisfaction with specific life aspects and with life as a whole. This instrument has a seven-degree scale, where 1 represents unfavorable, while 7 represents favorable pole of the scale.

SCL-90-R [25] consists of ninety items related to the symptoms of different disorders. They range from 0 to 4, for the population aged 13 to 70. The factor analysis of the symptom list distinguishes nine factors measured by this instrument: 1. somatization; 2. obsessions; 3. interpersonal sensitivity and vulnerability; 4. depression; 5. anxiety and phobias; 6. hostility; 7. paranoia; 8. psychoticism; and 9. various symptoms. The discrimination value refers to only three factors: somatization, depression, and anxiety with phobias. By scoring them, three more general indexes of the disorder are obtained: the severity of the disorder, the variability of symptoms, and the level of the subjective feeling about the disease.

Statistical analysis

The following statistical measures were used: arithmetic mean (AM) and standard deviation (SD) for quantitative parameters (subject age).

Pearson's correlation coefficient was used to determine the relationship between the QOL and the presence of somatization, depressive and anxious symptoms in our subjects, while multiple regression analysis has been used to determine to which extent the QOL was determined by the presence of somatization, depressive and anxious symptoms. Student *t*-test has been used to analyze the differences within the sample itself (in different diagnostic categories) – by presence of somatization, depressive and anxious symptoms.

Results

The presence of specific diagnostic categories from the group of stress-related disorders was the following: acute reaction to stress (F 43.0) was diagnosed in one (1.25%) subject, PTSD (F 43.1) in twenty (25%) subjects and adjustment disorder (F 43.2) in fifty seven (71.25%) subjects, while the diagnosis of the enduring personality change after a catastrophic experience (F 62.0) was made in two (2.5%) subjects.

The evaluation of the impact of depressive, anxious, and somatization symptoms on QOL suggested that the presence of all the three groups of symptoms was in negative correlation with the QOL. The multiple regression analysis showed that the presence of three mentioned types of symptoms explains as much as 40% of the variation in QOL ($R^2 = 0.4$; $F_{3,156} = 34.9$; $p < 0.01$).

After further examining which of the three above mentioned groups of symptoms had the greatest effect on the decrease of quality of life, the findings pointed at depressive symptoms, suggesting that the β ponder of this group was the highest, as shown in Table 1.

By using partial correlation, we tried to exclude mutual interlacing effects of somatization, depressive and anxious symptoms. Our findings demonstrated that somatization and depressive symptoms were in negative correlation with the QOL, explaining 2.89% (squared semipartial correlation) and 14.44% of variance, respectively, while anxious simptoms were in positive correlation with QOL, explaining 1.69% of variance, as shown in Table 1.

The comparison of the presence of the somatization, depressive and anxious symptoms among subjects with a different diagnosis of stress-related disorders, is shown in Table 2.

Our findings showed that there was a significant difference in the scores for somatization and anxious symptoms between subjects with adjustment disorders and subjects with PTSD – the subjects with PTSD had higher scores for both somatization and anxious symptoms. For depressive symptoms, there was no significant difference between the two groups of subjects ($p = 0.24$).

Discussion

Our findings have shown that all the three groups of symptoms (somatization, depressive and anxious) were in negative correlation with the QOL (somatization – 0.50; depressive – 0.61; and anxious – 0.43) and that they account for as much as 40% of the variation in QOL. We have found that depressive symptoms (compared to anxious and somati-

Table 1

The significance of contribution of somatization, depressive and anxious symptoms (SCL-90-R) to prediction of quality of life (MANSA)

Symptoms type	β	*t*	*p*	Correlation	Partial correlation	Semipartial correlation
Somatization	-0.267	-2.77	0.01	-0.50	-0.22	-0.17
Depressive	-0.610	-6.16	0.00	-0.61	-0.44	-0.38
Anxious	0.240	2.18	0.03	-0.43	0.17	0.13

SCL-90-R – Symptom Check List-90 Revised; MANSA – Manchester Short Assessment Quality of Life Scale.

Table 2

Average scores for somatization, depressive and anxious symptoms (SCL-90-R) in subjects diagnosed with various stress-related disorders

Symptoms	Diagnosis	n	Mean ± SD	*t*	df	*p*
Somatization	F 43.1	20	2.40 ± 1.03	2.88	75	0.01
	F 43.2	57	1.69 ± 0.93			
Depressive	F 43.1	20	2.33 ± 0.70	1.19	75	0.24
	F 43.2	57	2.08 ± 0.84			
Anxious	F 43.1	20	2.50 ± 0.92	2.61	75	0.01
	F 43.2	57	1.84 ± 0.98			

SCL-90-R – Symptom Check List-90 Revised; F43.1 – Posttraumatic stress disorder; F43.2 – Adjustment disorder; SD – standard deviation.

zation) within stress-related disorders had the greatest impact on the decrease of QOL.

In order to apprehend how anxious, depressive and somatization symptoms independently influence the QOL, we attempted to exclude the mutual overlapping effect of these three groups of symptoms (using partial correlation). By doing so, some interesting findings have been obtained. The negative correlation with QOL has been observed in 4.8% of somatization symptoms, and in 19% of depressive symptoms, while 2.9% anxious symptoms were in positive correlation with QOL.

A question arises – which parts of anxiety have a positive effect on QOL? It is possible that it is the "normal" anxiety, having useful, adaptive function, representing a warning signal suggesting that something should be done, i.e. facilitating an adequate perception of danger which gives a possibility of an appropriate protective reaction proportional to the level of threat[26]. On the other hand, this may also be certain kind of a ''positive" tension stimulating an individual, i.e. provoking an action that is a part of the course towards attaining life goals. Future studies on the impact of anxiety on the QOL may confirm or disapprove these hypotheses.

Comparing the group with adjustment disorders and the group with PTSD by presence of the three groups of symptoms, our findings have shown significant differences in scores for somatization and anxious symptoms (the subjects with PTSD diagnosis had higher scores for these two types of symptoms), while there was no significant difference between the two groups in presence of depressive symptoms.

Our findings are in accordance with the results of some other studies demonstrating the effect of anxious and depressive symptoms on the decrease of QOL [6, 16], where it is emphasized that depressive symptoms have a more compromising effect on QOL compared to anxious symptoms [17].

Furthermore, recent studies have shown that the QOL has been reduced the most in individuals with PTSD and with depressive comorbidity [27, 21, 28]. It was shown in a sample of primary care patients with various anxiety disorders [21], in a clinical sample of patients with PTSD [27], as well as in a sample of survivors of the war who developed PTSD [28].

To our knowledge, there are no other studies that explored the individual effect of specific types of symptoms in the *whole stress-related disorders group*. Although, according to ICD-10, the diagnosis of enduring personality change after catastrophic experience (F62.0) is not in the group F43 (Reaction to severe stress, and adjustment disorders) [1], we included it in our sample of stress-related disorders because, by definition, it can develop exclusively and only after a catastrophic stress experience and it is not necessary to explore personal vulnerability in order to explain its occurrence. This disorder does not exist in the Diagnosis and Statistical Normal of Mental Disorders (DSM) V [29], but there was a great debate whether the classification should include "a disorder related to extreme stress, not otherwise specified" [30], to which some authors relate to as "complex PTSD" [31]. It takes into consideration the functioning of an individual with the history of severe or prolonged trauma.

On the other hand, when it comes to specific stress-related disorders, such as PTSD, to our knowledge there are no other studies that explored the individual effect of somatization symptoms.

Apart from all methods of control that have been implemented, both methodological and statistical, our study may have certain limitations. Firstly, the study was retrospective and the data on the stressful event were collected retroactively. Another limitation of this study may also be the unequal proportion of certain diagnostic categories among subjects.

Conclusion

Our study showed that depressive symptoms (compared to anxious and somatization ones) of stress-related disorders have the greatest impact on the decrease of the QOL. For depressive symptoms, no significant difference was shown between individuals with adjustment disorders and those with a diagnosis of PTSD, while the subjects with PTSD had higher scores for somatization and anxious symptoms.

A clear identification and specific treatment of each of the mentioned groups of symptoms is necessary throughout all phases of treatment of stress-related disorders.

Targeted psychotherapeutic and psychopharmacological interventions aimed at depressive symptoms that are part of stress-related disorders could have a major effect on improvement of QOL of these patients and might be the way for an efficient prevention of the relapse of these disorders.

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