

ARE MACEDONIAN CHRONIC PATIENTS ALEXITHYMIC?

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Abstract

Psychological factors have been supposed as an important link in the chain of pathogenesis and the course of many diseases, especially stress-related ones. The field of psychosomatics is concerned with the study of the mind / body relations and, in this context, to the assessment of the influence of psychological factors on bodily changes and, consequently, with the development of illness.

Alexithymia, the inability to identify or label emotions, has been shown to be associated with patients with many chronic conditions.

The study was performed to obtain a) normal values of TAS-20 in Macedonian healthy people and b) to compare the results with a groups of chronic patients.

In this study, TAS-20 was applied as a measure of alexithymia.

It was concluded that the alexithymia construct is a permanent personality trait related to neurobiological brain specifics. The construct is important for both, either as a trigger or as the consequence of the illness. Patients with chronic diseases are more alexithymic than healthy people. In our research alexithymia has been confirmed in patients with cancer, rheumatoid arthritis and dialyzed patients as well as in patients after myocardial infarction. An alexithymia construct can influence the prognosis and outcome of the chronic disease. Anyhow, the psychological support for mediating alexithymia should be included in the therapeutic protocols of all chronic patients.

Key words: alexithymia, chronic patients, TAS-20.

Introduction

Alexithymia (from the Ancient Greek word *eilskə'θaimia*, is a personality construct characterized by the inability to identify and describe emotions in the self. The main characteristics of alexithymia are marked dysfunction in emotional awareness, social attachment, and interpersonal relating. Furthermore, individuals suffering from alexithymia also have difficulty in distinguishing and appreciating the emotions of others, which is thought to lead to unempathic and ineffective emotional responding.

Emotions, as important psychological functions, have evolved as the mind's way of esti-

mating priorities, in order to protect our own interests. Something that triggers little or no emotion is presumed to be an unimportant event which requires small attention, while something that causes high emotions is just the opposite. Fear, anger, happiness, confusion and other emotions all originate as signals from the subconscious to separate the trivial from the important, and they make highly useful logical shortcuts in decision-making. When stripped of this ability, the mind loses much of its effectiveness in prioritizing, causing the relevant and irrelevant to be given incorrect relative importance.

For this reason, persons with alexithymia tend to be highly indecisive and inconsiderate.

A link between affective disturbances and physical disorders has been suggested since the Graeco-Roman era. However, evidence supporting an association between mind and body is limited and mostly comes from recent neuro-immuno-endocrinological research studies performed mostly in North America and Europe.

The term and concept of alexithymia originally referred to a personality trait of psychosomatic patients. It was supposed that the poorer the capacity of a person to experience feelings and to express them verbally, the more the individual is liable to develop somatic symptoms in an emotionally stressful situation (Nimiah, 1976; Sifneos, 1996). The construct was explicated on the basis of clinical observations of patients with classical psychosomatic diseases who manifested an externally-oriented cognitive style and an inability to describe and differentiate feelings and to create fantasies. Many further studies confirmed that the clinical feature of the construct had been observed not only in psychosomatic patients but also among patients with post-traumatic stress disorders, patients with substance use disorders and patients with somatoform disorders (Matilla, 2008).

An alexithymia construct has a neurobiological basis related to the neuronal network in the right orbital frontal cortex (ROFC). The organization of the connections of ROFC is triggered by early emotional stimulation of the child by the mother.

The aim of this study is a) to evaluate alexithymia as a personality construct in healthy Macedonian persons and b) to compare obtained results with these of chronic patients such as: patients treated with chronic maintenance haemodialysis, patients with cancer, rheumatoid arthritis, myocardial infarcts, epilepsy, chronic headache and mothers of asthmatic children. All groups were randomly selected, where the main characteristic of the diseases was chronic duration.

Subjects and method

The control group comprised 180 healthy persons aged 50–70 years, similar to the ill patients, of both genders. Chronic patients groups were composed of: 100 cancer patients (50 fe-

males with breast cancer and 50 males with abdominal cancer); 50 patients with epilepsy; 50 with rheumatoid arthritis; 50 patients after myocardial infarction; 50 with chronic headache, and 50 mothers of asthmatic children. All examinees were randomly selected from the employees and patients of the University Clinical Centre, Skopje. In addition, we evaluated 230 patients treated with chronic maintenance haemodialysis, also randomly selected, recruited from three state centers for dialysis in R. Macedonia (two in Skopje and one in Struga).

As a psychometric instrument we used the 20-item Toronto Alexithymia Scale (TAS-20). Patients with an adequate educational level completed the questionnaire themselves, while others were interviewed by doctors/nurses.

The Twenty-Item Toronto Alexithymia Scale (TAS-20) was developed by Bagby et al. (1994) and is a revised version of the earlier 26-item Toronto Alexithymia Scale (TAS: Taylor, Ryan & Bagby, 1985). As a psychometric instrument, the TAS-20 has demonstrated good internal consistency and test-retest reliability.

Exploratory factor analysis of the TAS-20 yielded a three-factor structure congruent with the theoretical construct of alexithymia: (F1) difficulty identifying feelings and distinguishing between feelings and the bodily sensations of emotional arousal; (F2) difficulty describing feelings to others; (F3) externally-oriented thinking.

The TAS-20 has been translated into many languages, including Macedonian, using the method of back translation to establish cross-language equivalence (Pop-Jordanova, 1995).

Three subscales in the TAS-20 have been analyzed as follows:

- Difficulty describing feelings subscale is used to measure difficulty describing emotions (five items – 2, 4, 7, 12, 17).
- Difficulty identifying feeling subscale is used to measure difficulty identifying emotions (seven items – 1, 3, 6, 9, 11, 13, 14).
- Externally-oriented thinking subscale is used to measure the tendency of individuals to focus their attention externally (eight items – 5, 8, 10, 15, 16, 18, 19, 20).

Items are rated using a five-point Likert scale whereby 1 = strongly disagree and 5 = strongly agree. There are five items that are negatively-keyed (items 4, 5, 10, 18 and 19). The

total alexithymia score is the sum of responses to all 20 items, while the score for each subscale factor is the sum of the responses to that subscale.

The TAS-20 uses cutoff scoring: equal to or less than 51 means non-alexithymia, equal to or greater than 61 is alexithymia. Scores of 52 to 60 mean possible alexithymia.

The psychometric evaluation of all groups was completed over a period of two years.

In the evaluation of results descriptive statistics and t-test were used (Statistic package 7).

Results and discussion

The control group comprised 180 healthy persons, randomly selected, of both sexes. The mean age was 57.5 ± 12.6 years. Other groups comprised 50 patients each, of both sexes, at a similar age. The dialysis group is much larger (N = 230 patients) and will be analyzed separately.

Tables I shows obtained results for TAS-20 of all examined groups.

Table 1

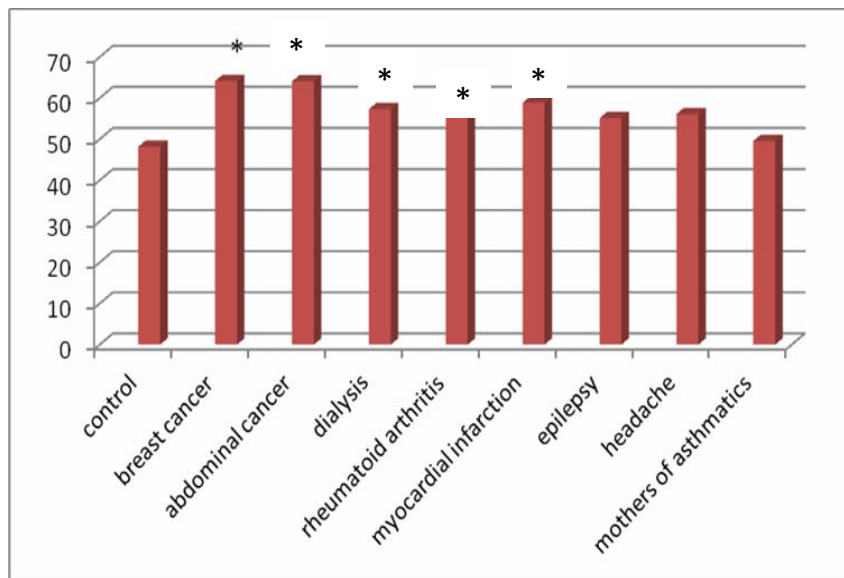
Obtained results for TAS-20

| Control group | Breast cancer (Females) | Abdominal Cancer (Males) | Dialysis patients | Rheumatoid arthritis | Myocardial infarction | Epilepsy | Headache | Mothers of asthmatic children |
|------------------|-------------------------|--------------------------|-------------------|----------------------|-----------------------|-------------|------------|-------------------------------|
| Mean 48.15 | 64.15* | 64.05* | 57.28* | 60.04* | 58.85* | 55.1 | 56.1 | 49.54 |
| SD \pm 9.35 | \pm 10.51 | \pm 10.70 | \pm 11.65 | \pm 12.52 | \pm 8.79 | \pm 10.91 | \pm 8.63 | \pm 10.69 |

*p < 0.01

As can be seen, all groups of chronically ill patients obtained statistically significant higher scores on TAS-20 which means a possible and real alexithymia construct. However, cancer patients showed the highest scores. They were followed by patients with rheumatoid arthritis,

myocardial infarction and dialysis patients. Patients with epilepsy and chronic headache, as well as mothers of asthmatic children, obtained normal scores which mean no alexithymia. A visual presentation of the same results is given in Fig. 1.



*p < 0.01

Figure 1 – Total scores for TAS-20 in different groups of examinees

The factor analysis showed that in dialyzed patients, cancer patients, myocardial infar-

ction and patients with rheumatoid arthritis F1 is predominant (difficulty in identifying feelings),

while patients with epilepsy and headache have predominantly F3 factor (externally-oriented thinking). Mothers with asthmatic children have predominantly F2 factor (difficulty in describing feelings). It is important that in the control group F3 is predominant, which means "externally-oriented thinking" and can be supposed as a dominant style in healthy Macedonian people.

The focus of this article will be on the patients treated with chronic maintenance dialysis, as typical chronic patients. This sample comprises 230 patients; 110 were females (mean age 55.5 ± 13.5 years), and 120 males (mean age 54.5 ± 14.3 years). The mean duration of maintenance dialysis was 8.3 ± 5.8 years (from 0.5 to 24 years).

The level of education was as follows: 3% were without any education; 48% had completed primary education; 43% had attended secondary school; 6% had a university degree. The TAS-20 was filled depending of the educational level: patients who could read and understand the questions filled in the questionnaire themselves, while for the others doctors filled in the questionnaire.

Obtained results for TAS-20 showed that 50% of patients obtained scores indicative of alexithymia construct, 18% had possible alexithymia, and the rest of 32% were non-alexithymic (Fig. 2).

The results for the alexithymic group only are presented in Fig. 3 (total mean score, together with three factors).

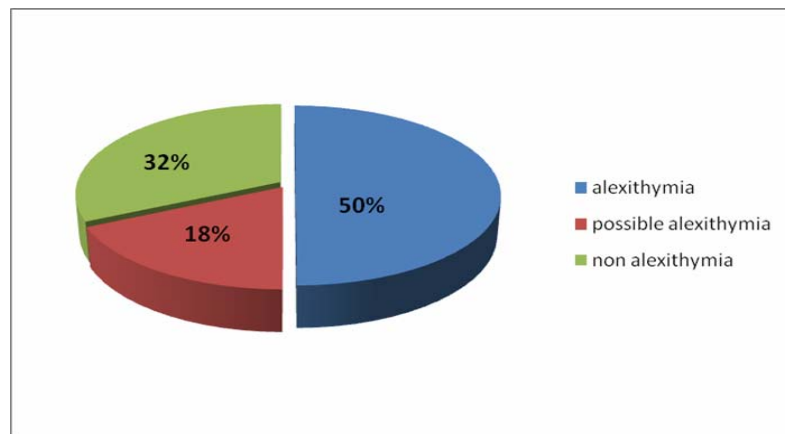


Figure 2 – Percentage of alexithymia, possible alexithymia and non-alexithymia in patients on dialysis

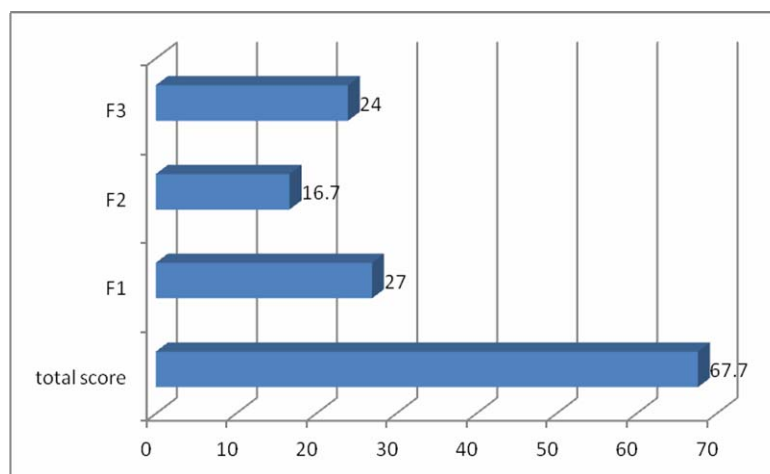


Figure 3 – Results obtained with TAS-20 for alexithymic group of dialyzed patients

As the most interesting, we selected two groups of chronic patients: cancer patients and dialyzed patients, and compared the alexithy-

mia construct by factor analysis with controls. The obtained results are shown in Table 2.

Table 2

Comparison of alexithymia structure in control, cancer and dialyzed patients

| Group | Total score | F1 | F2 | F3 | |
|-----------------|-------------|-------|-------|-------|------|
| Control | 48.81 | 16.35 | 11.78 | 20.68 | mean |
| | 9.59 | 6.55 | 3.49 | 3.46 | ± SD |
| Cancer | 64.1* | 24.51 | 15.03 | 24.55 | mean |
| | 10.7 | 6.1 | 3.39 | 3.07 | ± SD |
| Dialysis | 67.71* | 27 | 16.71 | 24 | mean |
| | 11.05 | 8.35 | 4.04 | 3.52 | ± SD |

* $p < 0.05$

As can be seen, dialysis patients have dominantly F1 (difficulty in identifying feelings), the control group F3 (externally-oriented thinking) while cancer patients have equally both F1 and F3 (difficulty in identifying feelings and externally-oriented thinking).

Generally, all chronic illnesses are related to many psychological characteristics. Some characteristics are primary, but many of them could be secondary to the chronic disease. As a common comorbid psychological characteristic, depression appeared to be present at varying levels especially in patients treated by dialysis. In a recent review and meta-analysis Palmer et al. (2013) analyzed the prevalence of depression among these patients using Medline and Embase articles. They found that the prevalence of interview-based depression is 22.8%, but is much higher (39.3%) if the depressive symptoms are diagnosed with self-report or clinician-administered scales.

In our article concerned with the personality characteristics of patients treated by maintenance haemodialysis (Pop-Jordanova and Polenakovic, 2012) we found a variable percentage of depression in examined patients checked with the Beck Depression Inventory: minimal in 21.43%, mild in 35.71%, moderate in 17.85% and severe in 14.28%. In addition, as specific characteristics of personality obtained with MMPI we found hypersensitivity, depressive mood and withdrawal from friends and relatives. As more specific emotional traits we found accentuated anxiety, a low level of hostility, and high passive aggression which destroys social communications. In many other studies psychological factors are pointed out as very important in the course and prognosis of patients with chronic kidney diseases.

Bearing in mind our previous findings about the personality characteristics of patients treated by dialysis, we supposed that alexithymia construct could be another important personality characteristic in these patients. Kojima M. et al. (2007) pointed out that alexithymia and reduced social support might have independent associations with the presence and the prognosis of depression among haemodialysis patients.

The relation between the personality type and mortality by cancer, for example, is a function of the pathogenesis of disturbances and imbalances of catecholamine in the brain. Patients with untreated depression are characterized by a decrease of catecholamine in the brain and consecutively the higher mortality rate from cancer is obvious in comparison with other causes of death (Glavin, 1985).

Together with cancer, many other chronic diseases are influenced by psychological factors. They can be supposed as crucial in triggering the start and, especially, in the courses and outcome of the diseases (Grossarth-Maticek, 1990). Psychological factors can, for example, raise blood pressure acutely, but whether they lead to the development of essential hypertension, as stated by Alexander in his early psychosomatic hypothesis, is not known (Jula, 1999).

Valkamo M. et al. (2001) in their research on coronary heart disease found that alexithymia was unrelated to cardiovascular risk factors or exercise capacity but was related to self-rated depression and decreased life satisfaction. Alexithymia appears to be associated with the enhanced psychosocial burden of suffering patients. It was concluded that this patient group may need more individual support and attention than other patients with heart diseases.

Lumley M. et al. (1996) in their review of empirical literature supposed four possible

pathways linking alexithymia and physical illness: (a) alexithymia leads to organic disease through physiological or behavioral mechanisms; (b) alexithymia leads to illness behavior (physical symptoms, disability, excessive health care use) through cognitive or social mechanisms; (c) physical illness leads to alexithymia; and (d) both alexithymia and physical illness result from socio-cultural or biological factors. This review suggests that alexithymia is associated with tonic physiological hyper-arousal, certain types of unhealthy behavior, and a biased perception and reporting of somatic sensations and symptoms.

Larsen J. et al. (2003) in their review based on different studies on neurobiological findings in alexithymia concluded that both cognitive and emotional characteristics of alexithymia are impaired. Firstly, alexithymia was correlated to *corpus callosum* dysfunctioning, and mainly impairments in cognitive characteristics of alexithymia were found, whereas other studies of right hemisphere and frontal lobe deficits have also found some correlations with alexithymia construct.

Alexithymia has been shown to be associated with the intensity of pain in patients with a number of chronic pain conditions. It was supposed that these associations are due to (1) a possible causal effect of alexithymia on patient functioning that is mediated via its effects on negative affect or (2) the possibility that alexithymia/outcome relationships reflect response bias caused by general negative affectivity (Hosoi M., 2010). In addition, Mehling W. (2005) found a strong association between alexithymia and low back pain.

Waller E. (2004) in research of alexithymia and somatoform disorders concluded that findings highlighted the important role of impaired affect regulation and negative affectivity in the process of somatization.

Porcelli P. et al. (2013) in a study devoted to alexithymia in different medically ill patients concluded that obtained results indicated that alexithymia is associated with a comorbid mood or anxiety disorder in about one third of cases; it is related to various forms of somatisation and abnormal illness behavior in another third and may occur without psychiatric comorbidity in another subgroup. Identification of alexithymic features may entail major

prognostic and therapeutic differences among medical patients who otherwise seem to be deceptively similar since they share the same psychiatric and/or medical diagnosis.

All these findings suggest that alexithymia as a personality characteristic is important either in the chain of the pathogenesis, or as a consequence of disease and can influence the course and the prognosis of the disease.

Conclusion

- Alexithymia construct is a permanent personality trait related to neurobiological brain specifics.

- The construct is important for both, either as a trigger or as a consequence of the illness.

- Patients with chronic diseases are more susceptible to alexithymia than healthy people.

- In our research alexithymia have been confirmed in patients with cancer, rheumatoid arthritis and dialyzed patients as well as after myocardial infarction.

- Alexithymia construct can influence the prognosis and outcome of chronic diseases.

- In any case, psychological support mediating alexithymia should be included in the therapeutic protocols of all chronic patients.

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Резиме

ДАЛИ МАКЕДОНСКИТЕ ХРОНИЧНИ ПАЦИЕНТИ СЕ АЛЕКСИТИМИЧНИ?

Нада Поп-Јорданова¹, Момир Поленаковиќ¹,
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Психолошките фактори се сметаат за значајна карика во ланецот на патогенезата и текот на многу болести. Психосоматската медицина е посветена на истражување на врската мозок/тело и во тој контекст на изучување на влијанието на психолошките фактори врз телесните промени и следствено, на развитокот на болеста.

Покажано е дека алекситимијата, како недостиг за идентификација и управување со емоциите, е присутна кај многу хронични состојби.

Цел на студијата е испитување на а) референтни вредности на ТАС-20 кај здрава популација и б) споредување на добиените резултати со оние кај разни хронични болни.

Во оваа студија, алекситимијата е одредувана со ТАС-20 како психометриски инструмент.

Заклучено е дека алекситимија конструктот е постојана психолошка црта заснована на невробиолошката специфика на мозокот. Конструктот е важен и како тригер, но и како последица на болеста. Пациентите со хронични болести се повеќе алекситимични од здравите луѓе. Во нашето истражување алекситимијата беше потврдена кај болни со рак, ревматоиден артрит, кај пациенти на дијализа, и оние по миокарден инфаркт. Алекситимија конструктот може да влијае на прогнозата и исходот на хроничната болест. Препорачано е дека психолошката поддршка, која ќе ја медира алекситимијата, да биде вклучена во протоколите за сите хронични болни.

Клучни зборови: алекситимија, хронично болни, ТАС-20.

