ANXIETY AND QUALITY OF LIFE OF PATIENTS WITH ISCHAEMIC HEART DISEASES

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ABSTRACT

THE PURPOSE of this study was to analyse the quality of life in patients with ischemic heart disease and possibilities to adapt to life with chronic disease.

METHODS: For the purpose of this study was developed a questionnaire which contained three panels. An adapted Bulgarian version of the SF-36 was used. This is a generic instrument for measuring quality of life. The second part contained a version of Spielberger's State-Trait Anxiety Inventory adapted by D. Shtetinsky. The third one included questions about demographic characteristics of the patients.

RESULTS: SF-36 results have shown higher values for physical and social functioning (61,70 и 63,83) while the psycho-emotional well-being perception was relatively low - 44,25. There was a correlation between emotional status and energy (P<0,001, r=0.65). Self-assessment of personal anxiety showed values mainly in the moderate scale. A connection was found between age and the impact of anxiety and emotional status of patients' daily routine (P = 0.015, $\chi2 = 8.44$).

CONCLUSIONS: The revealed physical limitations, the fatigue and reduced vital capacity in patients affected their normal functioning. Prevention of psychological stress and anxious attitudes in patients with ischemic heart disease would significantly improve their health status and work capacity.

Key words: quality of life, anxious attitudes, chronic heart disease, health well-being

INTRODUCTION

The connection between the quality of life and health is displayed in the contemporary concepts of holistic approach to the individual and client-oriented medicine. One of the important objectives of healthcare worldwide is improvement of the quality of life of patients, their psycho-social adaptation and independence from the disease. Studies of medical specialists are directed towards obtaining information from the personal experience of the patients, their personal prospects on the background of the disease, as well as from the problems of psycho-social adaptation and abilities for normal functioning in a family and professional environment (1, 2).

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Statistical data show that chronic cardiac diseases, including coronary heart disease, occupy leading places worldwide in respect of sick and death rate of the population, with pronounced negative effect in the countries of low and medium development. A considerable progress of prevention, treatment and rehabilitation reflects on improved prognosis for people with chronic heart diseases (3).

For patients with chronic cardiac diseases the quality of life is mainly influenced by psycho-social factors, the physical condition and the living environment. On the other hand, the psycho-social aspects, such as beliefs, social support, type of personality and coping strategies are important predictors of the condition of health or sickness. Patients with different personal characteristics differ in the way of expressing the symptoms of the disease and the need of medical staff to take care of them (4).

The efforts of the scholars today are directed towards creating a sensitive set of tools for measurement of the specific domains of the subjective concept of quality of life. Experience shows that for the purpose of obtaining a comprehensive picture of the patients' health status, a combination of generic and specific tools for particular diseases is most appropriate. They may be combined in relevant questionnaires for establishment of personal characteristics such as anxiety, depression, locus of control, etc. The advantages of the combined methodologies are related to establishment of the specifications of the relevant disease, the problems of the patients during treatment and adaptation and their clinical validity makes them sensitive to the significant changes in people in terms of the disease (5, 6, 7, 8). Those aspects gave us the reason to carry out our survey by combining a tool for assessment of the quality of life with a methodology for establishment of the individual level of anxiety.

THE PURPOSE of the survey is to analyze the quality of life of patients with ischemic heart disease and its importance for their psycho-emotional adaptation to life with a chronic disease.

MATERIALS AND METHODS

124 patients with ischemic heart disease took part in the survey. A questionnaire consisting of three parts has been developed.

The first part was an adapted Bulgarian version of the questionnaire Short Form-36 Health Survey (SF-36), a generic tool for assessment of the quality of life. The SF-36 is a widely used international standardized questionnaire, containing 8 subscales. They are combined in two scales: Functioning (subscales from 1 to 4) and Emotional well-being (subscales 5-8). Evaluation is performed using grades from 0 to 100, the higher rates meaning better quality of life. According to the authors of the questionnaire there is a possibility for comparison of the different subscales with the standard for the general population, which has a grade of 50 and standard deviation 10. When interpreting the obtained results, values below the standard are assumed as deviations under the relevant scale, while grades near 100 mean excellent quality of life (9).

The second part of the methodology contains the self-assessment tool for the level of anxiety *State-Trait Anxiety Inventory (STAI) of* Spielberger. We have used an adapted version for the Bulgarian conditions created by D. Shtetinski and P. Paspalanov (1989). The questionnaire contains two separate parts: for measurement of anxiety as a state of mind and as a personal characteristic feature. Each panel consists of 20 statements revealing the emotional stress. The evaluation of the responses is performed using a 4-point Likert scale: never, seldom, often, always. The total result is between 20 and 80. The norms for the Bulgarian population are 43,7 for men; SD=9,1 and 48,8 for women; SD=9,6 (10).

The demographic specification of the respondents is included in the third panel of questions from the questionnaire. Statistical processing of the results was performed using descriptive statistics, non-parametric and correlative analysis, with assumed level of significance of the zero hypothesis $P<0,05$.

RESULTS AND DISCUSSION

Data shows average age 59,26±1,15 years, provided that about half of the patients are over 61 (47,9%). The allocation by sex is 37,2 % men and 61,7% women. A little more than half of them (51,1%) report that they work; 42,6 % are retired; and 6,4% of them were unemployed at the time of the survey. Half of the respondents have a higher education, 40,4% - secondary education and the remaining 9,6% have a primary education. The most frequent accompanying diseases are arterial hypertension present in the larger part of the patients (96,2%), diabetes, dyslipidemia, osteoporosis.

The results of SF in the two basic panels – functioning and well-being, show some differences in the values. The patients evaluate their functioning as relatively good (57.82) under the scale from 0 to 100. In terms of emotional well-being, the value obtained is a little lower (49.34). The allocation of the mean values of the eight scales of the questionnaire, used for assessment of the physical and mental health is displayed in **Table 1**.

Table 1*. The statistical measures of the various dimensions of SF-36*

Scales	items	mean	SD	min	max
Physical health		**56,52**	**6,52**		
Physical functioning	10	61,71	22,39	19,15	87,76
Role physical	4	50,79	4,78	46,81	56,38
Pain	2	62,61	6,99	57,66	67,55
General health perception	5	50,96	7,05	40,42	58,78
Mental health		**50,65**	**10,89**		
Role emotional	3	54,96	2,68	52,13	57,45
Social functioning	2	63,83	2,63	61,97	65,69
Emotional well-being	5	44,25	14,04	30,85	58,94
Energy	4	39,57	9,66	27,23	50,85

Upon study of the influence of the demographic factors on the results for physical activity no considerable difference was found in regards of the sex (P>0.05). The education influences the physical functioning (P=0,002, $\chi 2$=12,25), the emotional well-being (P=0,007, $\chi 2$=9,88), the general health and energy (P<0.05). People with higher education show better results than the others. There was dependency between the age and the performance of labour-intensive (P=0,005, $\chi 2$=10,53) and moderately heavy activities (P=0,008, $\chi 2$=9,73), as well as upon climbing up stairs and floors (P=0,003, $\chi 2$=1,68). This was confirmed by M. Assadi-Lari et al (2003), they establish that elderly patients have more problems with their physical and social functioning (11). A correlation was found between the perception of emotional well-being and general health (P<0,001, r=0.49); a significant correlation between the vitality and the physical functioning (P<0,001, r=0.60); between the emotional condition and the feeling of vitality (P<0,001, r=0.65); between the restrictions of emotional and physical nature (P<0,001, r=0.57).

When studying the issues connected with the mental health and emotional welfare, low values of depression and bad mood are reported by 23.4% of the respondents and a feeling of suppression and sorrow – by 21.2% of the patients. In this connection the perception of personal happiness has also been decreased (54.25). The people at a younger age and professionally engaged feel happier when compared with the retired ones (P=0,001, $\chi 2$=20,35). One fourth of the respondents feel exhausted and lack energy, which increases with time (P=0,003, $\chi 2$=15,84). The allocation by mean values for the questions from the scale for emotional well-being is represented on **Figure 1.**
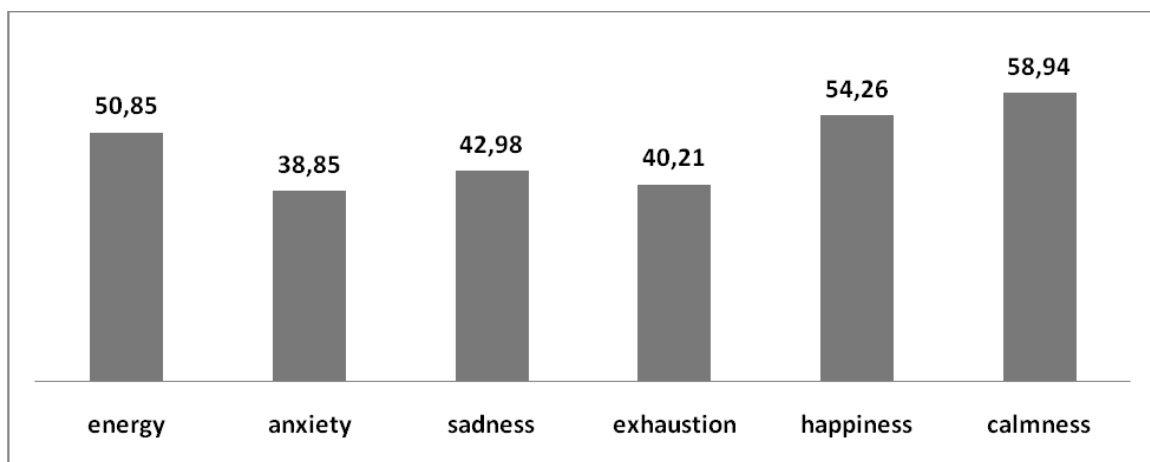
Figure 1. Mean scores of emotional well-being scale

When studying the mental and emotional condition the respondents report the availability of anxiety or depression and the influence of those feelings on their everyday life and professional activity. According to the patients the mental stress which they feel forces them to shorten the time for work and other activities (54.96). We found dependency between the age and the influence of anxiety and the emotional condition on the everyday activities of the patients (P=0,015, χ2=8,44).

Those results correspond to the levels of personal anxiety established by *State-Trait Anxiety Inventory (STAI) of* Spielberger. We was found an anxiety on 66,63 % of the women, while the share of male patients with anxiety is lower – 42,85%. We did not find a correlation between the anxiety, the ages and gender (P>0,05), **(Table 2).**

Table 2. *Mean scores of trait anxiety inventory by gender*

	mean	SD	min	max
Total	59,27	11,16	31	90
Male	61,63	11,26	31	85
Female	57,86	10,95	33	90

The study of anxiety as a feature of personality is very important since it preconditions the behavior of a person in situations of health and sickness. As a predisposition personal anxiety activates with the perception of certain stimuli assessed by the individual as dangerous and connected with specific situations of threat. For patients with cardiac diseases anxiety may have a positive effect for actions in the struggle with the disease. On the other hand, when it is continuous it may have negative psychological impact and limitations for effective treatment. Anxiety is a sign of emotional resistance of the personality and very often its importance is neglected by the medical specialists. Knowing anxiety may lead to a change from risky behavior to establishment of trust and consent on behalf of the patient in the process of treatment (12, 13, 14, 15).

The respondents define their social life as better, compared with their physical activity. In their opinion the health and emotional condition does not considerably influence their social contacts with the family, friends and colleagues – 65.69. The social activity of the people under 60 is better compared with the elderly patients (P=0,001, χ2=12,9). A study of D. Bakova carried out in 2010 confirms the positive influence of the social support, emotional stability and good relationships on the health status and full-value adaptation in society. The data obtained from studies Allahverdipour, H., et al. (2013), regarding the vital functioning of patients with cardio-vascular diseases show a number of problematic areas and serious changes in the ordinary life of those people. The challenge for the contemporary healthcare is along with the treatment to reduce the influence of the sickness on the everyday life, the profession and the family role. A serious task before the health and social institutions is improvement of the social adaptation and increase in the quality of life of people with chronic diseases. The prevailing opinion is that the monitoring on the way of life has a considerable importance for its longevity and satisfaction with the accomplishment of the life goals (16, 17, 18).

CONCLUSIONS

The data analysis shows reduced evaluation of the quality of life of the studied group with regards to their emotional and physical condition and a higher estimate of the social functioning. No differences between men and women have been reported with respect to difficulties in the everyday activities, professional life, as well as the opportunities for social contacts.

In patients over 60 the restrictions of physical nature are higher, as well as the feeling of tiredness, anxiety and lower social activity. Data evidence reduced perception of psycho-emotional well-being, which is directly related to the health and the quality of life.

The reported restrictions in the mobility, the feeling of tiredness and lower vital capacity in

patients with ischemic heart disease impede their normal existence. At the same time the emotional instability and anxious adjustment have a negative influence on the feeling of health.

The information from similar surveys may be successfully used for the creation of new strategies for improvement of the healthcare, reduction of the costs for health and reaching years of satisfactory high quality life.

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