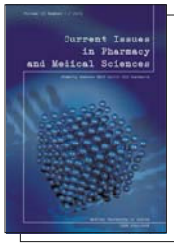

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The patients' subjective assessment of health status after myocardial infarction

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ABSTRACT

Chronic disease process, regardless of the phase or intensity affects the quality of life of the patient. The purpose of the study was to analyze the quality of life of patients after myocardial infarct based on self-evaluation and identification of variables affecting the subjective assessment of patients. The study included 268 patients after myocardial infarct. The research tool was a questionnaire survey developed by the authors. The subjective assessment of the health status of patients was analyzed as well as the influence of gender, age, education, place of residence, time elapsed between the occurrence of disease, material conditions, and knowledge about the infarction. It was found that patients after the incident of myocardial infarct, when assessing health, usually rate it as good and satisfactory, avoiding the extreme assessments. Subjective evaluation was associated with the selected variables. The health condition was better assessed by the youngest patients, the persons to 30 years of age and the oldest – above 70 years as well as better educated people, having a good material situation, living in the city, ant those patients whose disease occurred over a year before and having knowledge of the disease. Medical personnel were often the source of information on heart failure, and to a lesser extent the Internet and mass media. Family members of the patient should have the knowledge of myocardial infarction and its consequences to give him support in further treatment and rehabilitation, as well as prevent against disease incidents in the future.

Keywords: myocardial infarction, quality of life, subjective assessment of health status

INTRODUCTION

Self-evaluation of health is recognized by the World Health Organisation as one of the main subjective indicators of population health [7]. Measurement of subjective health is justified because of an urgent need to develop own concept of health, its understanding and perception in the context of the emotional and physical well-being. Based on own concepts of health, own assessments of the health and wellbeing, people generally plan their life and consider various possible options for its health-related choices [9]. Around the world, both diabetes and cardiovascular diseases constitute a big problem. Chronic disease process, regardless of the phase or intensity, affects the quality of life of the patient [2]. Most often, it leads to dissatisfaction, feeling the lower value and very often to the limitations of the patient in playing roles in society. Many research works, confirm that the patients with diabetes or after myocardial infarction assess their health condition of poorer quality than those patients without chronic diseases [13, 14].

The purpose of the study was to analyze the quality of life of patients after myocardial infarct based on self-evaluation and identification of variables affecting the presented assessment of health status.

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MATERIAL AND METHODS

The survey included 268 patients after myocardial infarct recovering in spa hospital, in Nałęczów town. The research tool was a questionnaire survey developed by the authors of the study and verified in a pilot study. There was analyzed subjective assessment of the health status of patients as well as the effect of gender, age, education, place of residence, the time elapsed between the occurrence of disease, financial conditions, and knowledge about the infarction. The obtained results were statistically analyzed. The values of the analyzed quality parameters measured in the nominal scale were characterized with the use of size and proportion. To detect the existence of differences between the analyzed groups there was used homogeneity test χ^2; to detect a relationship between those features the Spearman correlation coefficient was used. There was assumed 5% error of inference and the related significance level $p<0.05$, which indicated the existence of statistically significant differences or the relationship between the examined characteristics. Statistical analysis was conducted based on computer software STATISTICA 9.0 (STATSOFT, Poland).

The study involved people aged 26-76 years. The average age of respondents was 54 ± 11.4 years. Most were men – 64.9% (174 persons), while the women – 35.1% (94 persons). The average age of women was 51 years ± 10.8 years, while of men – 55.6 + 11.4 years. The observed differences

were statistically significant (t = 3.196; p = 0.001). The place of residence for the majority was a city – 187 persons (69.8%), while 81 persons (30.2%) represented the rural population. The majority of the surveyed were persons with vocational education – 103 persons (38.4%), subsequently subjects with secondary education – 85 people (31.7%), with higher education – 57 persons (21.3%) and elementary education was reported by 23 persons (8.6%).

The most numerous group included the pensioners and emeriti – 95 persons (35%), subsequently, blue collar workers – 75 (28%), and people whose work requires physical and intellectual activity – 39 (14.6%), white collar workers – 59 people (22%).

Most of the surveyed persons were married – 175 (65.3%), while 42 people (15.7%) were widows/widowers, 38 persons (14.2%) – maids/bachelors, while 13 persons (4.9%) were divorced.

The good material conditions were confirmed by 123 persons (45.9%), satisfactory – by 112 subjects (41.8%), and very good-by 29 (10.8%), while bad conditions – by 4 persons (1.5%).

RESULTS

In assessing their health condition, the majority of respondents identified it as good – 124 people (46.3%), 103 subjects (38.4%) as sufficient, 33 subjects (12.3%) as very good, and 8 people (3.0%) as bad (Fig. 1).

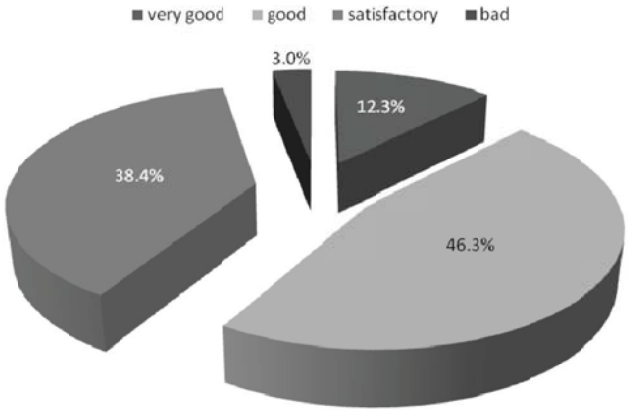
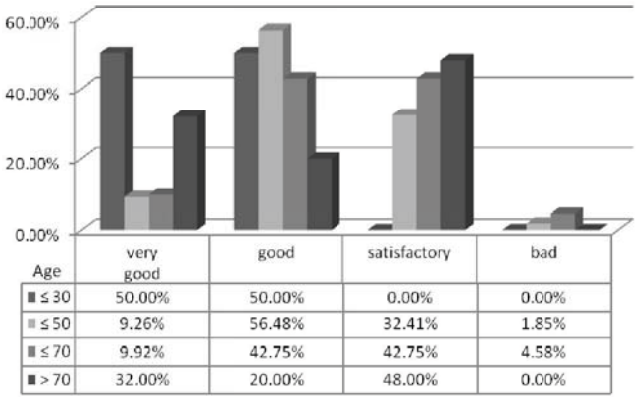


Fig. 1. Subjective assessment of health status

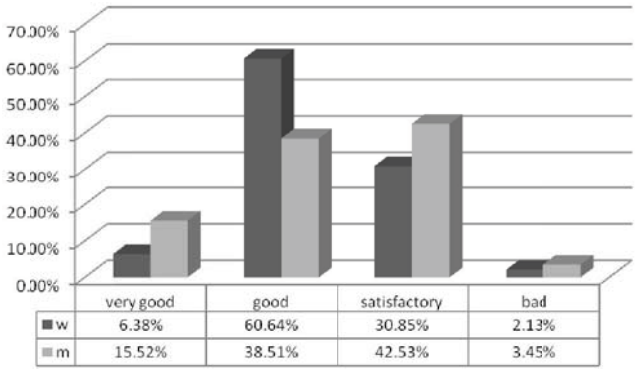
The presented evaluation was associated with:

- patients' age (χ^2 = 26.669; d.f. = 9; p = 0.0016). Most often the youngest subjects, i.e. below 30 years of age and the oldest persons over 70 years, reported very good and a good health condition, while in the other age groups there was an increase in the proportion of patients' evaluation of their health as sufficient and bad (Fig. 2);
- gender (χ^2 =13.119; d.f. = 3; p = 0.0044). Among women, over 60% of the respondents assessed their health as good, and nearly 31% assessed it as satisfactory. Proportions of men evaluating their health as good and satisfactory were similar and were respectively: 42.5% and 38.5%. More than twice more often men than women rated their health as very good; men – 15.5%; women – 6.4% (Fig. 3);



Age	very good	good	satisfactory	bad
≤ 30	50.00%	50.00%	0.00%	0.00%
≤ 50	9.26%	56.48%	32.41%	1.85%
≤ 70	9.92%	42.75%	42.75%	4.58%
> 70	32.00%	20.00%	48.00%	0.00%

Fig. 2. The influence of age on the subjective assessment of health condition



	very good	good	satisfactory	bad
w	6.38%	60.64%	30.85%	2.13%
m	15.52%	38.51%	42.53%	3.45%

Fig. 3. The subjective assessment of health condition with regard to gender

- the level of education. Spearman correlation coefficient showed statistically significant relationship between the level of education and the subjective evaluation of health. The higher the level of education the better self-rating of health status (R = 0.35; t = 6.05; p < 0.05);
- the place of residence (χ^2 = 12.87; d.f. = 3; p = 0.005). The biggest differences in self-evaluation of health were observed in two categories, "very good" and "satisfactory". Significantly statistically more often city dwellers rated their health as very good (city – 16.6%; village – 2.5%), while the rural population often selected the category "satisfactory" (village – 49.4%; city – 33.7%). Both in the city and in village the proportion of subjects rating their health as good was at about the same level (city – 46.5%; village – 45.7%) (Fig. 4);
- the time elapsed between the occurrence of myocardial infarction. The surveyed were suggested four answers: three months, half a year, a year, more than a year. There was a significant relationship between the time and a subjective assessment of health status (χ^2 = 83.905; d.f. = 9; p < 0.05). It was observed that with the time elapsed since the infarction, the assessment of the health status was even better;

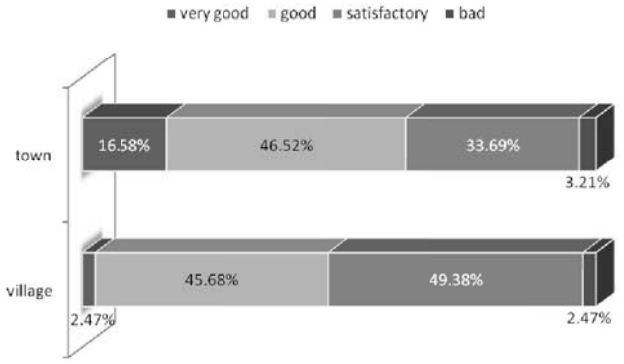


Fig. 4. The impact of the place of residence on the subjective assessment of health condition

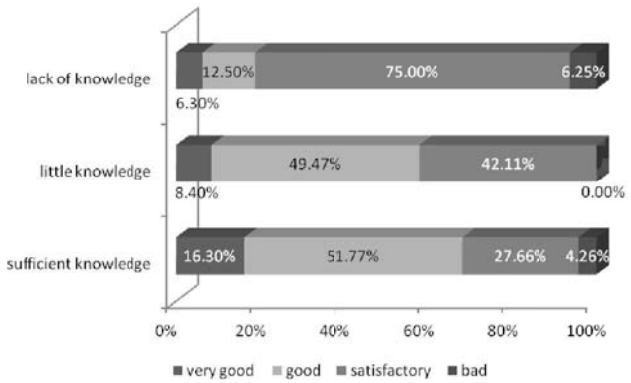


Fig. 6. The influence of age on the subjective assessment of health status

– the material conditions. There were proposed four types of responses to evaluate the material conditions: very good, good, average, poor. The material conditions were found to have statistically significant impact on the subjective assessment of health status. Patients emphasized that the material conditions influence the availability of medical benefits, as well as the decisions concerning prescribed by a doctor cheaper medicines. Spearman correlation coefficient proved that the better material conditions the better self-rating ($R = 0.25$; $t = 4.145$; $p < 0.05$).
– knowledge about their disease. In the opinion of the 141 people (52.6%) knowledge about their disease was sufficient, 95 persons assessed it as little (35.4%), other – 32 persons (12%) stated that they had no knowledge on their disease (Fig. 5).

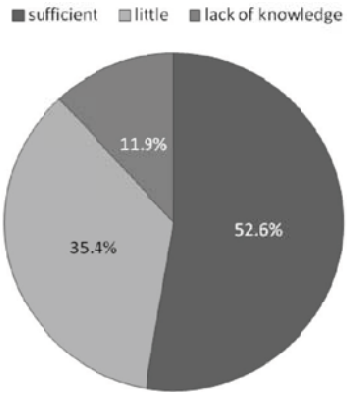


Fig. 5. Assessment of the knowledge of the patients about their disease

The main source of knowledge in most cases was the medical personnel – 153 persons (57.1%); subsequently respondents listed the Internet, television, the press – 67 people (25.0%) and family and friends – 48 persons (17.9%). State of knowledge has statistically significant impact on subjective assessment of health status ($\chi 2 = 33.442$; d.f. = 6; $p < 0.05$). People who knew about their disease sufficiently and a little, often evaluated their health as very good or good, while the patients knowing nothing about their disease most often rated their health as satisfactory or bad (Fig. 6).

DISCUSSION

Subjective assessment of health status of patients after myocardial infarction is an important cognitive and practical factor, which can contribute to improving the quality of care provided to patients. Recognition of the assessment of own health made by patients, is an important element in the process of treatment and care, allowing patients to be actively involved in the implementation of these processes.

Worse quality of life with increasing age, worse social conditions and the incidence of coronary heart disease, hypertension, diabetes or myocardial infarction, have been reported in the literature [3, 12]. The deterioration of quality of life of patients after myocardial infarction is understood as the physical condition and functional abilities, psychological status and well-being and social and functional interactions in specific roles [1].

Health status is determined by many factors, including environmental factors, which undoubtedly are related to the level of awareness and knowledge of the health of patients after myocardial infarction, included in secondary prevention of [5, 10].

Relatively little research is devoted to the psychological effects of heart attack, the effectiveness of therapy and rehabilitation. The problems associated with them were analyzed mainly in terms of emotional disturbances, subjective assessment of health status, attitudes towards the disease, the world, and oneself. Research shows that in patients after myocardial infarction often a poorer quality of life, depressed mood, depression, fear of another cardiac incident, excessive focus on the illness, social isolation, are noted. These patients have a reduced level and scope of everyday activities and their self-perception is changing [4].

The results of the presented research indicate that myocardial infarction can cause significant changes in the life of a patient. On the one hand, the consequences of myocardial infarct in varying degrees impair the efficiency and physical fitness of the organism; on the other hand, they are the cause of many psychological problems. This cardiac incident and its effects are in fact the source of severe psychological stress, which the patient is not always able to cope with. All this adversely affects the subjective assessment of health status and, consequently, the quality of social and occupa-

tional functioning of individuals, including partial or total incapacity for work [11].

According to the multi-center study conducted for a long time, heart disease is known to be primarily a consequence of a person's life style, which depends largely on psychological characteristics of individuals such as needs, attitudes, and preferred values. These characteristics are the psychological categories that are not subject to change because of pharmacological intervention, but it is possible to modify them while influencing the cognitive (education) and emotional-motivational sphere (psychotherapy) of a human [8].

The present study confirms that the perception of health and disease by patients after myocardial infarction shows a statistically significantly higher correlation, presented in a group of people living in the city, who are women, persons under 30 years and above 70 years of age, with a higher education. The respondents' replies indicate that self-assessment of health is better in the patients whose disease occurred over a year before and who had sufficient knowledge of the attack.

Elimination of risk factors for coronary artery disease in many patients encounters great difficulties. This is often because one forgets that many somatic disorders such as hypertension, obesity, hyperlipidemia and behavior that increases the risk of myocardial infarction (smoking, alcoholism, lack of physical activity, often have their origin in the patient's complex psychological and social problems [6]. Identification of these abnormalities and their correction by changing lifestyles, ways of thinking and functioning in the environment may be the key to overcome and eliminate the factors responsible directly for the heart attack.

CONCLUSIONS

Subjective assessment of health status presented by persons after myocardial infarction was associated with age, gender, place of residence, material condition, the time that elapsed between the occurrence of the disease and the knowledge about the disease. They rated their health most often as good and satisfactory, avoiding the extreme assessments. Better ratings of their health condition were reported by younger patients – 30 years of age and the oldest – over 70 years old, better educated people, having a good material situation, living in the city, as well as patients whose disease occurred over a year before and having sufficient knowledge about the infarction. The knowledge most frequently originated from medical personnel, to a lesser extent from the Internet and media. The family members of the patient should have knowledge of myocardial infarction and its consequences to give him support in further treatment and rehabilitation, as well as to prevent against disease incidents in the future.

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