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Health locus of control, self-efficacy and dispositional optimism in patients with diabetes mellitus 2 - review of the literature

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Abstract

In the literature on prevention, health promotion and psychology, much attention is paid to the determinants of health, with particular emphasis on lifestyle and practiced health behaviors [1]. The individual choice of the type of behavior adopted depends on the patient's level of general knowledge, in particular knowledge of health care, as well as experience, motivation, recognized values and set goals. An important element of considerations on this subject is to recognize the beliefs and motives of patients' actions in the area of life that significantly affects health [2]. An important factor modifying activity in the process of maintaining biopsychosocial health or preventing complications of an existing chronic disease is the locus of health control and the sense of self-efficacy, as well as a sense of optimism in life.

The paper analyzes selected psychological resources, health locus of control, self-efficacy and a sense of optimism in patients with type 2 diabetes, which are related to the process of coping with a chronic disease. A chronic disease confronts the patient with many tasks and challenges that change over time. They depend, among others on: type of disease, method of treatment, cognitive characteristics of the sick person, emotional and behavioral reaction as well as socio-cultural conditions in which the person functions. [3]

Key words: Health locus of control, self-efficacy and dispositional optimism, patients, diabetes mellitus 2.

Introduction

In the literature, there are works on individual aspects, e.g. a sense of optimism in relation to patients after a cancer diagnosis [4-6], in patients with pain [7] or people in a selected age group [8], or in combination with a sense of anxiety or quality life. [9] Also, there are few studies on the locus of

control of health in patients with concomitant diabetes [10], the studies focus rather on other disease entities.

Comparing the self-efficacy indicators of seven clinical groups, including women after mastectomy, patients after myocardial infarction, diabetics, on dialysis, Juczyński [11] showed that the highest level is found in diabetic patients. Similar results can be found in the work of Wrzeńska et al. [12], on patients with multiple sclerosis. The results obtained by the authors confirm the impact of self-efficacy on the course of the disease as an important feature characterizing the way of adaptation to it. In research on chronic diseases such as diabetes, heart attack, asthma, self-efficacy has a protective function against negative attitudes and deterioration of physical and mental health. [13] This may indicate the involvement of the respondents in the process of dealing with a chronic disease and greater perseverance in achieving the goal, even in the face of obstacles. When obstacles appear on the way to the goal, people with high self-efficacy increase their effort to overcome them. They act similarly when they are dissatisfied with the results of their actions. Failure often evokes negative emotions in them, i.e. anger, disappointment, but also mobilizes them to make further attempts to achieve the goal. Conversely, people with low self-efficacy will do the opposite. Failure can lead them to feel helpless, depressed and give up their desire to achieve their goal. [14]

In the available literature, there are works that thoroughly analyze the differences in self-efficacy in relation to various sociodemographic and clinical factors. In the studies of Wrzeńska et al. [12], a higher level of self-efficacy was found among men than among women. In the study by Biernacka et al. [15], it was shown that the factor differentiating the level of self-efficacy is age, the older the patient, the lower his self-efficacy. Thus, it can be assumed that the more old age becomes perceptible as a period of unproductive and meaningless human life, the more it is perceived as stressful, which may be associated with a decrease in self-esteem and self-efficacy. [15] Completely different results were obtained by Jachimowicz et al. [16], conducted among residents of a Nursing Home, where the level of self-efficacy in old age remained at a high level. The authors of other studies suggest that the factors that may affect the level of self-efficacy may include the level of education, compliance with therapeutic recommendations [17] and health behaviors [18], as well as marital status and related social support [19], which are so important in diseases chronic.

In the case of type 2 diabetes, special attention is paid to specific pro-health behaviors: adherence to a diet, regular glycemic monitoring, regular physical activity, maintaining a proper body weight, maintaining perinormoglycemia, and adherence to medical recommendations [20]. In their studies by Schwarzer et al. [21] showed that self-efficacy has a significant impact on health behaviors. Other studies [22, 23] also show that self-efficacy allows predicting declared health behaviors, especially those related to mental attitude and avoidance of negative emotions.

According to the literature, diabetes control is more likely to become worse in the absence of a sense of influence on the development of the disease. However, there is also another possibility, i.e. the lack of compensation, especially long-term, could, through faster development of complications, coexistence of other diseases, ultimately modify the patient's posture and reduce the sense of influence on the progression of the disease. The presence of a disease such as diabetes is a risk factor for cognitive impairment. [24] Cognitive impairment also affects adherence to medical advice. These disorders worsen the ability to systematically carry out the recommended activities. Patients often forget to take their medications or follow other recommendations, and their quality also deteriorates. [25] Studies by Okura et al. [26] showed a significant relationship between poorer cognitive functioning and higher concentrations of glycosylated hemoglobin.

Diabetes complications are less common with a high GSES index. According to the study by Haduch-Pietruszka et al., diabetic patients who did not have any chronic complications of diabetes showed a significantly higher level of self-efficacy compared to patients with complications. [27]

As for the relationship between treatment and self-efficacy, Kokoszka and Sieradzki [28] found that patients' self-efficacy increases with the introduction of combined treatment. Perhaps more complex methods of treatment make the patient aware that he has an impact on the course of therapy and is able to cope with advanced activities, i.e. self-injection of insulin or appropriate adjustment of doses.

In the perception of a chronic disease and the personal impact on it, it is important to believe in the scope of possibilities to improve one's own health. In this case, we are talking about a health locus of control.

People with an internal locus of control are characterized by a stronger personality and self-confidence. They are distinguished by high life aspirations and self-confidence. [29] An external locus of control occurs when an individual finds responsibility for specific life situations outside of themselves. He does not trust himself and does not believe in the effectiveness of his own actions. She believes that no matter what she does, her situation is conditioned by external factors. A person with an external locus of control is usually insecure, passive, and more dependent on others. [30] The location of control is related to health as a factor determining human behavior. It changes throughout life, and its stability is determined by various random situations. [29]

In the study by Basińska et al. [30] conducted in a group of patients with insulin-dependent diabetes mellitus, the highest locus of health control was the internal locus, but in the group of men it is much higher than other sources. Patients with type 1 diabetes are the least likely to believe that their health depends on chance. Also Pilewska-Kozak et al. [31] draw attention to the internal location of health control in the group of aging men.

According to existing reports [11], people with an internal locus of control are much more likely to undertake health-promoting behaviors, while people with an external locus of control are less likely to undertake these behaviors because they are convinced that their own health is beyond their direct control. It is worth noting that the patient is expected to take pro-health recommendations from the moment of diagnosing diabetes. However, the patient himself may not have the intention of engaging in these behaviors. In most models of health behavior, attention is paid mainly to the need to engage in self-care and self-control, especially in diabetes.

In the case of the recommendations of the therapeutic team, the aspect of activity enforced by the role of the patient appears. As it has been proven many times, own tasks are more motivating than imposed tasks, so the internalization of external requirements, which are medical recommendations, becomes more important here. [32] People suffering from diabetes, compared to those suffering from RA and ischemic heart disease, are more convinced that they can influence the level of their own health and that their personal activities will translate into health, and they have the ability to influence the course of treatment, which most likely will be effective. [29] Perhaps this is due to the fact that these patients, wanting to avoid complications, are faced with the need to behave in a certain way.

The lack of a sense of the importance of one's own impact on health weakens the motivation to follow the recommendations, which in turn leads to metabolic imbalance. In the literature, abnormal concentration of glycated hemoglobin is found in patients who are dominated by the belief that they have an external locus of health control, in Polish patients with both types of diabetes [33] or in American patients with type 2 diabetes, greater out-of-control is characterized by a lower tendency to follow a proper diet. The patient may declare that he will adhere to the diet, but it is known that when he is characterized by extrinsic control, it can be expected that it will be much more difficult for him to implement it, despite good will. [34]

Optimism and a sense of self-efficacy occupy a special place among personal resources that determine the broadly understood quality of life of both healthy and ill people (especially chronically ill). [35]

Dispositional optimism plays an important role in the development and course of disease, [36] optimists perceive their risk of disease to be much lower than that of other people. They believe in the possibility of preventing diseases [37], research on optimism and its impact on the functioning of the body of chronically ill people shows that in the case of the cardiovascular system, being optimistic is definitely associated with numerous benefits. Patients with a high level of optimism have lower blood pressure values, and in stressful situations their values increase less [38]. Optimists are also less likely to suffer from heart disease [39], and if they do get ill, the healing process is faster. They are also less likely to suffer from thromboembolism [40] and re-infarction. Among cancer patients, it was also revealed that if they are characterized by a high level of optimism, they are able to respond better and faster to treatment. [41] Studies have also been conducted on the impact of chronic autoimmune disease on the level of optimism, and in the case of type 1 diabetes, the sense of optimism decreased slightly and permanently, but in patients with multiple sclerosis the decrease was significant. [42]

By analyzing optimism among patients with chronic pain, clinicians could better predict coping and adjustment to the disease. [43]

Data available in the literature show a high level of optimism, especially in patients with chronic diseases. [44] Only studies by Basińska et al. confirmed the average level of optimism in patients with chronic thyroid disease. [36]

During the COVID19 pandemic, it has become a significant challenge for patients to display a high sense of optimism as it may imply a belief that bad things are less likely to happen to themselves than to others. [45] While optimism can be useful in avoiding negative emotions [46], it can lead to underestimating the likelihood of contracting a disease [47] and thus ignoring public health warnings [48]. Communication strategies must strike a balance between overcoming optimism biases without creating excessive feelings of anxiety and fear. [45]

Summary

The somatic state of the patient affects the mental state and vice versa - by determining the way of proceeding and coping with difficulties, the mental state affects the somatic state. The location of health control, self-efficacy and the level of dispositional optimism in patients with type 2 diabetes may become very important in planning patient education, increasing the level of knowledge, as well as strengthening the patient's support in taking care of their own health and preventing complications.

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