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Increasing the Motivation of Students for Practical Work Through Motor Activity in Elderly People with Diabetes

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Abstract

Elderly people with diabetes should change their lifestyle in the direction of regular exercise of moderate physical activity and maintenance of a certain physical condition. The high level of physical activity reduces insulin resistance of tissues (especially skeletal muscles); prevents obesity; reduces overweight, which is associated with lower plasma LDL-cholesterol and triglyceride levels, and higher HDL-cholesterol plasma levels, as well as lower blood pressure. The aim of the present study is the implementation of rehabilitation events at the Diabetes Center in Sofia, Stara Zagora, in the elderly with diabetes through the

active participation of the students from the specialty "Medical rehabilitation and ergotherapy".

Material and methods. The subject of the study is 120 diabetic patients in the Diabetes Social and Public Center - Stara Zagora. Rehabilitation events are applied depending on the motor skills. The activities are twice a week with a duration of 50 minutes, with the participation of the students of the specialty "Medical Rehabilitation and Ergotherapy" at the Faculty of Medicine at the Trakia University during the clinical practice and pre-graduate practice.

Methodology of the study. Anthropometric measurements, a specialized test for daily life activities (DLA) and a Quality of Life Test were performed. The latter consists of four parts (1. Physical health and daily life activities; 2. Psychological test and appearance; 3. Social and personal relationships; 4. Environment and financial resources). It gives a very accurate idea of the quality of life of diabetic patients. Tests were performed in 120 diabetic patients before and after rehabilitation formed in five rehabilitation groups, depending on their motor skills. A rehabilitation program of all groups is also implemented within one calendar year with voluntary and active participation of the students. The program includes: kinesitherapy (physical exercise with a large therapeutic ball and dosed walking), proper nutrition, ergotherapeutic activities (DLA and functional ergotherapy) and art therapy (making souvenirs, cards, etc.).

Results and discussion. The activities of everyday life are of the utmost importance for a person's autonomy. These are related to getting up in the morning, dressing up, taking breakfast, dressing and undressing. It refers to moving the body into space, changing its position, occupying different positions, moving with aids or without help. It is important for the everyday use of tools, appliances - they support the execution of DLA. The results achieved in improving daily life activities and gait stability confirm the thesis that exercise of regular physical activity in diabetic patients maintains well muscles, prevents the onset of complications by the nervous system and the locomotor apparatus.

Inferences and conclusions: The use of rehabilitation and

art therapy has a positive impact on the quality of life of elderly people with diabetes; To achieve good results in the rehabilitation of elderly people with diabetes, early initiation, inclusion of work activities and training into independent daily activities are necessary; The application of ergotherapy and art therapy stimulates patient autonomy, mental health and social activity;Improvement and diversification of work leads to improving the quality of life of older people with diabetes.

Keywords: motivation, clinical practice, motor activity, elderly people, diabetes, prevention of complications.

Introduction

The quality of life and its elements have many definitions and interpretations. They are subjective and objective indicators of the physical, psychological, and social characteristics of the patient. The quality of life is a broad understanding of the balance between good and bad in the individual's body, soul, and environment as well as his pessimistic or optimistic view of life [23,24,27].

Ergotherapy is an active process in which the patient is engaged in a purposeful activity, emotionally satisfying. [8,9]. It is used in the rehabilitation and re-socialization of elderly people with diabetes through various work activities and training in everyday life activities . It distracts the attention of old people by diverting them from different problems, has emotional effect in various activities and contributes to building new skills. [10,31,32] The classes are conducted individually or in groups; in different settings - in rehabilitation centers, in elderly homes and other specialized centers [21,26].

Patients belong to different age groups, when observing the specifics of each. Every age has its own model of everyday activities typical for that period of life. In middle-aged people are applied different types of work activities, and in the elderly - training in daily life activities and entertaining ergotherapy (horticulture, floristry, modeling, etc.). [4,5,20]

I. Topuzov (2006) defines the quality of life as a synthesis of the standard of life, personal interests and their realization in the style of life.

At the present stage, the importance of quality of life stands out due to the following features: increasing the number of chronic illnesses and prolonging their lives; incomplete healing, only improving vital functions; improving the role of the personality and hence the complexity of the psychological problems; changing health goals and striving for health welfare, regardless of disease or disability; taking into account the medical effects on treatment and quality of life, not just prolonging the life of the patient [16].

Quality of life is a measurable concept that includes as a constituent element the standard of life, the individual's personal interests and their realization in the style of life.

The standard of life is determined by the quantitative biological, social and economic dimensions of life. It is a measurable assessment of health, material, intellectual and formal interests.

Personal interests reflect the qualitative and psychosocial dimensions of life. They assess the degree of satisfaction that the individual feels with his / her intellectual, cultural, aesthetic and moral values [28,29].

The lifestyle is the individual complex of the standard of living and personal interests. It is influenced by the country's traditions, the religion that confesses the person, the political system, the ideological and geographic conditions. As a collective expression, the style of life (of the person) is influenced by the individual's bio-psychological features [24].

According to modern authors in the field of ergotherapy, the quality of life is a more important factor, as a reflection of disability on the person than the disability itself [3].

To assess the quality of life, we use: medical methods for assessing and determining the patient's rehabilitation potential (Clinical Quality of Life Scale in Grades 1 to 3); psychological assessment; sexological assessment; sociological assessment; a practical assessment and a comprehensive assessment of the quality of life, as a summary of the remaining estimates [17,30].

Improving the quality of life of elderly people with diabetes is achieved through the comprehensive approach of modern rehabilitation, including physical exercise, occupational activities in the form of ergotherapy and art-therapy activities.

Exercises and sports are used in the prevention and treatment of elderly people with diabetes. Their versatile healing and prophylactic effects counteract premature aging by keeping the aging organism at the highest possible structural and functional level. Group activity is recommended, but in the absence of such an opportunity, adults may also be self-employed by giving them the necessary instructions for self-control and proper exercise. [2,6,7]

Art therapy serves to mobilize the creative potential. It is based on internal mechanisms for mobilization, activation, self-regulation and self-preservation of the individual. Increasingly, it enters the life of contemporary people as a scientific area of knowledge and as an increasingly practical practice with great impact effectiveness and with many different techniques of art-therapeutical work. It is based on the fact that the creative process associated with making art is curative and brings a positive change of life, stimulates the psychics, activates the creative potential, and develops new skills [15].

It is best to take care of adults with diabetes by specialists - rehabilitators, kinesitherapists and ergo-therapists - to follow the most appropriate approach to

the realization of this high-level humanitarian work, such as preserving the health, employability and vitality of the a large proportion of the population [25,22].

Purpose and objectives of the study

The aim of the present study is the implementation of rehabilitation events at the Diabetes Center in Sofia, Stara Zagora, in the elderly with diabetes through the active participation of the students from the specialty "Medical rehabilitation and ergotherapy".

Material and methods

The subject of the study is 120 diabetic patients in the Diabetes Social and Public Center - Stara Zagora. Rehabilitation events are applied depending on the motor skills. The activities are twice a week with a duration of 50 minutes, with the participation of the students of the specialty "Medical Rehabilitation and Ergotherapy" at the Faculty of Medicine at the Trakia University during the clinical practice and pre-graduate practice.

Methodology of the study. Anthropometric measurements, a specialized test for daily life activities(DLA) and a Quality of Life Test were performed. The latter consists of four parts (1. Physical health and daily life activities; 2. Psychological test and appearance; 3. Social and personal relationships; 4. Environment and financial resources). It gives a very accurate idea of the quality of life of diabetic patients. Tests were performed in 120 diabetic patients before and after rehabilitation formed in five rehabilitation groups, depending on their motor skills. A rehabilitation program of all groups is also implemented within one calendar year with voluntary and active participation of the students. The program includes: *kinesitherapy (physical exercise with a large therapeutic ball and dosed walking),*

proper nutrition, ergotherapeutic activities (DLA and functional ergotherapy) and art therapy (making souvenirs, cards, etc.).

The following methodological guidelines have been followed in the implementation of the rehabilitation program for working with the elderly with diabetes: Simple physical exercise was used at the beginning of the activities of adults and elderly people; the method of display is used in the study and execution of physical exercises, gradually including the verbal method. The load is gradual, precisely metered, and this is determined by the reduced adaptive and recovery capabilities of the patient's body.

Statistical methods for processing the results were used. The results of the performed tests were marked in a specially developed card for diagnosis and rehabilitation of the patient and the data from the study was processed with the statistical computer program STATGRAPHICS, WINDOWS, EXCEL using the Wilcoxon rank test - statistical method for analysis and distribution of nonparametric data.

Results and discussion

The activities of everyday life are of the utmost importance for a person's autonomy. These are related to getting up in the morning, dressing up, taking breakfast, dressing and undressing. It refers to moving the body into space, changing its position, occupying different positions, moving with aids or without help. It is important for the everyday use of tools, appliances - they support the execution of DLA [14, 18, 19].

The results achieved in improving daily life activities (Figure 1) and gait stability confirm the thesis that exercise of regular physical activity in diabetic patients maintains well muscles, prevents the onset of complications by the nervous system and the locomotor apparatus.

Fig. 1 represents the results of the DLA for residential and professional activities for upper limbs before and after rehabilitation, including computer manipulation, telephone use and other fine motor activities that did not pose serious difficulties for patients. The Wilcoxon curve forms a peak at the beginning and end of the rehabilitation course and shifts to the right.

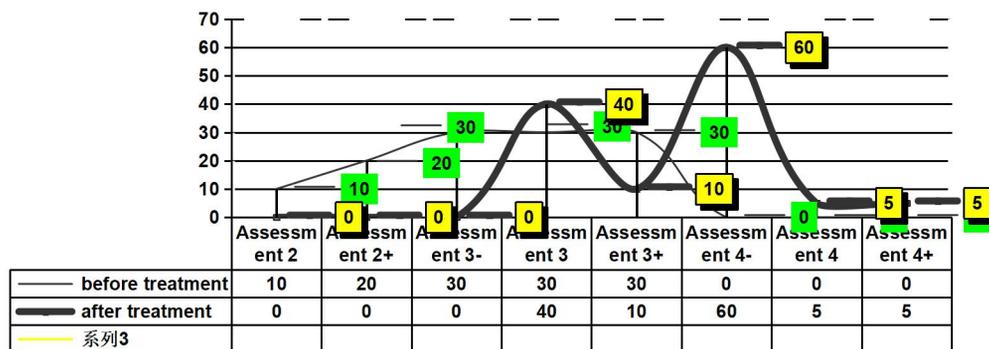


Fig. 1. Results of the DLA test for residential and professional activities for upper limbs before and after rehabilitation

This result is indicative of the stimulating effect of kinesitherapy, ergotherapy and art therapy on the motor activity of patients. All of them have increased motor skills in everyday activities, become more confident in these activities and have developed creative potential and art-therapy skills. All crafted articles were arranged in an exhibition.

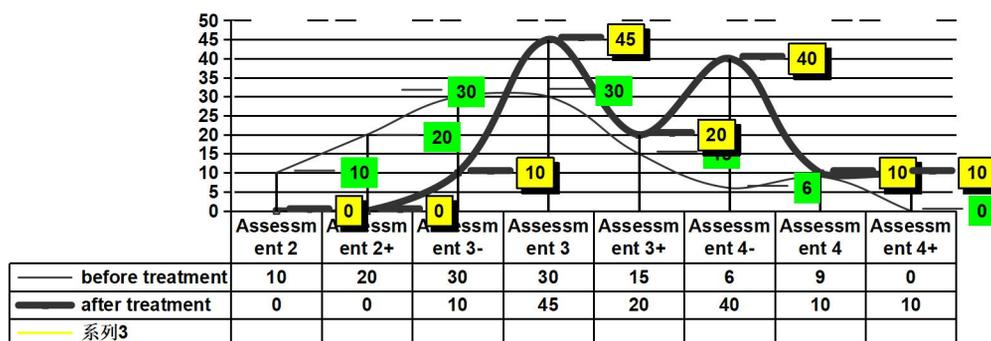


Fig. 2 Results of the DLA test for residential and professional travel related activities before and after rehabilitation

In Fig. 2 there are presented the results of the DLA for domestic and professional activities related to travel before and after the rehabilitation, including: crossing the streets, using personal and public transport (descent and boarding), driving and other motor activities. The Wilcoxon curve forms one top at the top and two tips at the end of the rehabilitation course and shifts to the right, which is a proof of the proper DLA training for older people with diabetes for street-crossing activities, which often leads to a fall and disturbs the balance of walking.

The joint events organized by the Diabetes Association of Stara Zagora and students of the Medical Rehabilitation and Ergotherapy course at the Faculty of Medicine at the Trakia University stimulate and motivate elderly people with diabetes to a more active way of life and more social contacts. Culinary exhibitions and art-therapy workshops are organized for the great Christian holidays with many guests and pleasant emotions. There are organized outdoor tours along the routes to Metodi Kusev Park (Ayazmoto).

All these joint actions improve the quality of life of the elderly with diabetes and are voluntarily carried out by the students [11,12,13].

The results of the Quality of Life Test: The correlation between the influence of physical and mental health of patients is direct, significant in strength and

statistically significant ($R = 0.61$, $p < 0.05$). This is proof of the significant impact of rehabilitation and art therapy on the quality of life of older people with diabetes.

Inferences and conclusions:

The use of rehabilitation and art therapy has a positive impact on the quality of life of elderly people with diabetes; To achieve good results in the rehabilitation of elderly people with diabetes, early initiation, inclusion of work activities and training into independent daily activities are necessary; The application of ergotherapy and art therapy stimulates patient autonomy, mental health and social activity; Improvement and diversification of work leads to improving the quality of life of older people with diabetes.

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