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DIABETES COMPLIANCE RESEARCH RESULTS AND PROSPECTS FOR STUDY

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Abstract
Currently, there are a large number of diseases that require close attention from the patient and the doctor due to their resistance (immunity) to treatment, which leads to a significant social burden due to a high vital threat or disability. This requires the patient to strictly adhere to the prescribed treatment. In these diseases, the patient is the "subject" of the treatment process, since the effectiveness of therapy and its results largely depend on his activity, adequacy and purposefulness of behavior. Based on this, we can say that compliance is one of the criteria for the effectiveness of diagnostic and treatment measures. Since in the process of treatment and rehabilitation in patients their adherence to treatment is important, the prognosis and dynamics of the patient's condition largely depend on this.

Keywords: diabetes, compliance, research, results, prospects, study.

QANDLI DIABET MUVOFIQLIGI TADQIQOTLARI NATIJALARI VA O'RGANISH ISTIQBOLLARI

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Introduction

A report by the World Health Organization (2003) was devoted to a review of research on compliance in long-term treatment. The report considered the characteristics of compliance to treatment in diseases such as asthma, oncological diseases, depression, diabetes, epilepsy, HIV infection, hypertension, smoking cessation, and tuberculosis. The analysis of studies devoted to the study of compliance to treatment in various diseases made it possible to identify several directions of its study:

1) compliance research in case of mental health disorders;
2) compliance research during infection;
3) compliance research in chronic diseases.

Let's consider a study dedicated to the study of the characteristics of compliance with the recommendations of medical personnel in diabetes.

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of behavior. Based on this, we can say that compliance is one of the criteria for the effectiveness of diagnostic and treatment measures. Since in the process of treatment and rehabilitation in patients their adherence to treatment is important, the prognosis and dynamics of the patient's condition largely depend on this.

Diabetes mellitus (DM) is one of the most serious modern diseases. It is a major risk factor for health complications, including heart disease and stroke, blindness, kidney and nervous system disease, limb amputations, and an increased risk of death. In 2014, according to WHO, there were more than 422 million people in the world suffering from diabetes, the incidence of which has doubled since 1980. The mortality rate from diabetes is also high: in 2012 it amounted to more than 1.5 million cases. At the same time, diabetes can be treated, in which the patient's activity, compliance with the doctor's recommendations and following a correct lifestyle play an important role. Modern research shows that treatment adherence depends on the patient's personal characteristics. Knowledge of personality traits can predict which groups of patients may have difficulty adopting a healthy lifestyle.

Problems with complying with medical orders are based on a whole complex of factors. WHO identifies five groups of factors influencing the level of compliance.

• Social factors, which include - financial situation, cultural level, economic illiteracy, age, distance to a health care facility.

• Systemic (related to the healthcare system), these include the doctor-patient relationship, the education of paramedics, the capabilities of the healthcare system, the duration of a medical consultation, the distribution of medications.

• Disease-related factors include severity of symptoms, physical burden, stage of disease progression, comorbidity, availability of effective therapy.

• Therapy-related factors - complexity of the regimen, duration of treatment, difficulties in selecting therapy, adverse reactions to drugs, ineffectiveness of prescribed therapy.

• Patient-specific factors - fear of unwanted side effects, premature cessation of treatment, unreasonable expectations, forgetfulness, knowledge about the disease.

In this paragraph we will try to consider the relationship between personality traits and compliance in patients with type 1 and type 2 diabetes mellitus.

Traditionally, there are two types of diabetes mellitus. Type 1 diabetes is diagnosed more often in childhood and adolescence and is characterized by an absolute deficiency of insulin. Persons with type 1 diabetes must lead a strictly defined lifestyle and undergo supportive care. Under these conditions, the role of compliance and personal characteristics (for example, optimism) is great. In addition, diagnosis in childhood changes the social situation of the child's development, which acts as a risk factor for the development of personality anomalies. Type 2 diabetes is associated with a relative deficiency of insulin and occurs mainly in adulthood against a background of excess body weight and a sedentary lifestyle. Although it is generally accepted that a certain personality type is not typical for patients with diabetes, at the same time, the literature describes personality traits that are characteristic both of patients with diabetes in general, and separately of patients with types 1 or 2 of the disease.

In modern science, medical and psychological practice, terms such as "compliance", "adherence" (commitment), "comprehensive disease management" (disease management), "concordance" (compliance), "persistence" are used to denote compliance. . Translated from English, compliance means "agreement, adaptation, commitment, sharing of views, desire to conform." The term

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"compliance" has become established in the medical literature, but has several meanings. The most common definition of compliance is understood as consent to treatment, cooperation with the doctor and compliance with all requirements of therapy. Another meaning of the term "compliance" means the accurate and conscious implementation of the doctor's recommendations during treatment, and is widely used by practitioners both abroad and in Russia, mainly when discussing the problem of drug therapy.

One of the most important problems on the way to improving the results of managing patients with diabetes mellitus (DM) is their lack of adherence to treatment, or low compliance. Compliance (from the English "compliance" - "agreement, conformity, implementation, observance") underlies the successful treatment of most chronic diseases that require the patient to have long-term, sometimes lifelong, active, conscious and responsible participation in treatment. Compliance includes cognitive (cognitive) and behavioral components, i.e. it can be considered simultaneously as the patient's attitude towards treatment and the behavior resulting from this attitude. The cognitive component of compliance as an attitude is expressed in the patient's desire or intention to follow recommendations concerning his health (= "agreement"), and compliance as a behavior characterizes the actual implementation of these recommendations in everyday life (= "compliance"). These 2 components are, of course, inextricably linked with each other and do not work separately.

Unsatisfactory compliance with all aspects of the management of diabetes and its complications occurs in 30–75% of all patients with diabetes. Compliance with taking or administering antidiabetic drugs directly affects the indicator of long-term compensation of carbohydrate metabolism - glycated hemoglobin (HbA1c), although in some cases (for example, in patients with low incomes) this relationship is not always evident. The use of mathematical models has shown that improving patient compliance with various components of diabetes therapy from 50% to at least 80% reduces the predicted probability of micro- and macrovascular complications by almost 30%.

The term "compliance" is often used in a narrow sense, meaning adherence only to drug therapy. An adequate level of compliance is considered to be taking at least 90% (for some authors - 80%) of the prescribed amount of the drug. Compliance is influenced by a very large number of different factors, starting from age, the characteristics of the patient's psychological status, his well-being and ending with the characteristics of therapy, including the complexity of the treatment regimen, the number of prescribed drugs, the frequency of their administration and even the appearance of the packaging. The modern multicomponent approach to the treatment of diabetes and the prevention of its complications dictates the need to prescribe several medications to each patient. It is therefore not surprising that patients with diabetes find compliance with therapeutic recommendations more difficult than patients with other chronic diseases.

Patients with diabetes receive more prescriptions for almost all categories of drugs, and for such groups as antibiotics, psycho- and neurotropic, cardiovascular, gastroenterological, non-steroidal anti-inflammatory drugs - almost 2-3 times more than in the population as a whole. Of course, this reduces patient compliance with taking various medications. If the same patient, in addition to diabetes, has other diseases that require drug therapy, for example, diabetes and arterial hypertension, then compliance with glucose-lowering and antihypertensive therapy is higher if both types of drugs are prescribed by the same doctor.

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In foreign studies, which assessed what percentage of prescriptions for antidiabetic drugs patients present at pharmacies, it turned out that on average they redeem only half (±1/3) of the monthly need for drugs. The more complex the drug dosage regimen, the lower the compliance. Thus, with an increase in the number of drug doses per day, compliance decreases by approximately 22% with each increase in the frequency of administration. Compliance with taking oral hypoglycemic drugs (OHDs) ranges from 79% for drugs taken once a day to 38% for drugs taken three times a day. The compliance of patients with type 2 diabetes even to PSS monotherapy is very low and ranges from 31% (sulfonylurea) to 34% (metformin), with the most unsatisfactory indicators noted in old age and with an increase in the number of drugs simultaneously taken to treat concomitant diseases. When a sulfonylurea drug and metformin are prescribed simultaneously, compliance drops to 13%. Compliance with insulin therapy also ranges from 20 to 80%; this range is likely due to different approaches to measuring and interpreting compliance. The compliance of patients with diabetes is the lowest in relation to recommendations for lifestyle changes: nutrition – from 1 to 20% and physical activity – from 19 to 30%.

Data on the influence of factors such as social, family and financial status, level of education, social isolation, and duration of therapy on compliance are very contradictory and do not allow us to clearly outline the profile of a "non-compliant patient." It can be said without exaggeration that long-term and 100% compliance with medical recommendations in everyday life is generally unrealistic, and any patient "adapts" the doctor's recommendations to his specific socio-economic, educational and cultural situation.

Speaking about the cognitive component of compliance, it should be emphasized that the reasons for its low level are individual and very diverse for different diseases; These include fears of side effects of medications, reluctance to "take the pill," misjudgment of one's health, lack of ability to cooperate, misunderstanding of medical recommendations and their inconsistency, lack of motivation, desire to avoid the "stigma of diabetes," cognitive-mnestic impairments, and many other factors. No matter how varied the formal reasons for non-compliance with received recommendations by patients regarding various aspects of diabetes management may be, they are united by one thing: patients change their behavior only when these changes are personally significant for them.

The concept of compliance, therefore, covers not only compliance with a drug or diet therapy regimen. It is broader and reflects a whole range of aspects of the patient's behavior, which coincides with the medical recommendations he received. These behavioral aspects can be specific to a particular disease and in our case are referred to as "diabetes-related behavior". Foreign diabetologists have been discussing this problem since the late 1970s. In Russian-language publications, the terms "compliance", "compliance" and "PSD" appeared in 1994–1995.

In recent years, in foreign literature, the term "compliance" has been replaced by the term "compliance" (eng. adherence). It is not easy to differentiate them, since the direct translation of the term "compliance" into Russian does not fully reveal its meaning, and the term "adherence to treatment" proposed instead is more consistent with the literal meaning of the English word "adherence" - "compliance". The founders of the concept of "compliance," R. Haynes and D. Sackett, considered this word to be synonymous with the word "adherence." However, currently in the English-language literature, the term "compliance" implies the patient's behavior, limited by medical recommendations and determined by the doctor, i.e., a kind of "passive obedience to the doctor's orders." In contrast, its alternative, adherence, suggests that patients are given more

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autonomy in making therapeutic decisions and self-care. However, by and large, both terms – "compliance" and "adherence" – are not correct enough from an empirical, logical and methodological point of view, since behavior associated with a disease always includes many components and changes over time, and therefore cannot reflected by one construct requires a multidimensional assessment.

The terms "self-care" and "self-management" have been coined and endorsed by the American Diabetes Association (ADA) to describe the set of behaviors that people with diabetes engage in daily to manage their disease. and other official diabetes organizations as preferred terms over "compliance" and "adherence". The change in terminology reflected what happened in the 1990s. in Western diabetology, a paradigm shift in the relationship between doctor and patient from passive "obedience" to the active and conscious participation of a trained patient in the treatment process.

The main indicators by which one can judge the positive and constructive orientation of design and action documentation include, in particular:

a) the presence of a "diabetes diary" with relevant entries (results of self-monitoring of glycemia, changes in drug doses, features of well-being and daily routine);

b) frequency of self-monitoring (which is judged by the "diabetes diary" and the dynamics of objective indicators, for example, HbA1c);

c) independent adaptation of the dose of SSP (according to entries in the "diabetes diary");

d) the patient always has easily digestible carbohydrates with him to relieve hypoglycemia;

e) compliance with the rules of foot care for diabetes.

The most important psychological factors influencing compliance/PSD are the patient's personality characteristics, his subjective "disease model" (SMD), ideas about his health, attitude towards health and illness, types of so-called coping behavior, self-efficacy, emotional disorders caused by diabetes, level subjective control ("locus of control"). Let's look at the main ones.

The traditional model of diabetes care is based on physicians attempting to persuade patients to accept medically important treatment goals and, accordingly, make lifestyle changes and take numerous medications. However, more often than not, in the patient's imagination, in his real "momentary" life, these treatment goals do not have the same importance as the doctor attaches to them. The authors attribute this to the fact that many patients with diabetes do not attach sufficient importance to their disease, since they often have no subjective symptoms, complications are asymptomatic for a long time, and therefore they experience particular difficulties in accepting the diagnosis and implementing recommendations associated with lifelong therapy and image change life. In such a situation, the doctor's imperative recommendations, a kind of "pressure", especially reinforced by frightening information about the prognosis of the disease, can have only a very short-term motivating effect, which can rather be called pseudo-motivation. Much more often, the opposite picture emerges: the patient's psyche cannot withstand the high level of anxiety (essentially created by the doctor), and after a short period of strict adherence to the recommendations, unpleasant information is displaced from the patient's consciousness and a return to low compliance occurs. Denial, rejection of the fact of diabetes "works" according to a similar mechanism.

Thus, we can say that the study of factors influencing the adherence of patients with diabetes mellitus to therapy, the search for controllable mechanisms is one of the priority areas for the

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development of domestic healthcare. We have made an attempt to explore and identify controllable factors that influence patient compliance with prescribed therapy.

The analysis of research aimed at studying compliance to treatment in diabetes showed that some of them were devoted to determining the factors of adherence to the instructions, and some of them were devoted to the methods of formation of compliance to treatment.

We will consider the results of some studies devoted to the study of compliance factors in diabetes. N.W. In their article, Likhodey et al. (2018) reviewed the factors preventing the formation of compliance with the treatment of diabetes patients and identified non-compliance. Passive and active low compliance were considered in the article. For example, the inability of the patient to comply with the prescribed treatment is included in low passive compliance (primary noncompliance), periodically stopping taking the drug; taking the wrong medicine. Active low compliance is when the patient consciously refuses the prescribed course of therapy. The patient independently makes a decision by weighing the risks, the negative effects of the treatment and its benefits.

The WHO report notes that self-management skills and self-care play a key role in the treatment of diabetes. In general, factors in one form or another are associated with compliance to treatment in diabetes, they are combined into 4 groups of factors:

1) peculiarities of treatment and characteristics of the disease. These factors include the complexity of the treatment, the duration of the disease and the provision of medical care. For example, in diabetes, a negative correlation has been found between the duration of the disease and compliance with treatment - the more the patient suffers from diabetes, the less likely he is to follow the instructions of the medical staff;

2) individual factors, including age, gender, self-esteem, work on oneself, tolerance to stress and depression, alcohol abuse. For example, a patient older than 25 years spends less time on physical activity than younger people with type 1 diabetes. Or, patients with type 1 diabetes show higher levels of self-care and esteem related to their physical activity routines and adherence to oral hygiene. ;

3) interpersonal factors, including the relationship between patients and medical staff, peculiarities of social support. For example, among patients with type 2 diabetes, compliance with blood glucose monitoring is very low. Or that children and adolescents with type 1 diabetes whose parents support them have high rates of adherence to daily blood glucose testing;

4) external factors that include two factors - high-risk situations and the environment. For example, a taxonomy of high-level dangerous situations has been developed (situations of overeating or undernourishment during communication with people).

E.S. Yemelyanov, A.L. Khokhlov, M.V. Pobedinseva (2013) determined the motivation of type 2 diabetes depending on the duration of the disease. Inpatient and polyclinic patients took part in the study. In the treatment of diabetes mellitus, not only patients, but also relatives of the patient are of the greatest interest when there are significant and dangerous changes in the development of the patient's condition, life expectancy. Patients with diabetes for one to ten years are less motivated to seek treatment. Insulin therapy is influenced not by the duration of the disease, but by subjective factors.

O. V. Mayorova, T. S. Khrusheva (2018) determined compliance in the treatment of type 1 diabetes based on the frequency of late complications. Scientists have identified patients with type 1 diabetes with a higher level of compliance at a longer stage of the disease. The higher the stage

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of the disease, the higher the compliance if late complications develop. For example, patients with type 1 diabetes for more than 10 years regularly measure blood sugar and know the amount of glycated hemoglobin. They often follow a diet. In cases where the patient cannot assess the severity of his illness, the level of compliance decreases due to incomplete and not always fulfilling the doctor's recommendations.

N.A. Yarkova, N.N. Borovkov (2016) reviewed the characteristics of treatment compliance in type 2 diabetes patients. In order to increase the level of compliance, the authors offer diabetes patients to study in a special school, familiarize themselves with special literature, calculate the bread unit table, calculate the glycemic index and kilocalories of products, and keep a self-management diary. In addition, the implementation of the following, which is important for control, leads to the achievement of therapeutic goals in the treatment of patients with type 2 diabetes, prevents the development of complications of the disease.

Ye.V.Surkova, O.G. Melnikova (2009) found that half of patients with type 2 diabetes reported taking medication regularly. The results of the research show that patients do not take the main drugs (71.2%), the other reason (30.8%) is the wrong perception of the drug therapy procedure or the fear of "harm" from the drugs. fear These data lead to the decision that diabetes patients should be educated. Patients are often advised to carry pill boxes, timers, and a diabetes diary.

REFERENCES

1. Hasanova, N., Karamyan, M., Mamatova, N., & Ilkhamova, D. (2020). Research methodology and its organization of motivational valuable characteristics of the relationship with treatment of patients with diabetes. *International Journal of Pharmaceutical Research*, *12*(Suppl. ry 2), 1074-1077.
2. Хасанова, Н., & Дехконбоева, З. (2023). Motivational determinants of youth involvement in fitness practices. *Узбекистан-2030: наука, образование и экономика в развитии*, *1*(1), 81-85.
3. Xasanova, N. A. (2023). Davolanishga sodiqlik DGU 25002.
4. Хасанова, Н. А. (2023). Психологические исследования приверженности личности лечению. Вестник интегративной психологии, *1*(1), 454-458.
5. Xasanova, N. A. (2022). Qandli diabetda shaxsning kasallikka va davolanishga munosabatning xususiyatlari. UzMU, *1*(1), 190-194.
6. KIZI, H. N. A., KARAMYAN, M. K., & MUKHTOROVNA, M. N. (2022). Methodology research motivational-value characteristics attitude to treatment in diabetics and its organization. *NeuroQuantology*, *20*(9), 5812.
7. Xasanova, N. A. (2021). Surunkali kasalliklar va ularning Asoratlarini davolashda xulq-atvorning Motivatsion-qadriyatli omillari. Infeksiya immuniteti farmakologiya, *1*(5), 297-300.
8. Xasanova, N. A. (2020). Shaxsning davolanishga munosabatining sotsiodemografik va tibbiy omillari. Immunologiya, *1*(1), 75-78.
9. Xasanova, N. A. (2017). Ibn Sinoning ta'lim jarayoni va axloqiy tarbiya haqidagi qarashlari. The Significance of the Scientific and Cultural Heritage of Ibn Sino (Avicenna), *1*(1), 195-196.
10. Elamanovna, D. M. (2021, March). Works and environmental education. *Archive of Conferences*, 17(1), 79-80.

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