Psychological Intervention on the Disease of Patients with Poor Diabetes Control

Ping Zhang

Baicheng Medical College, Jilin 137000, China

zhangp458@bcmc.edu.cn

Abstract: Diabetes is an endocrine and metabolic disease, which is caused by insufficient secretion or poor insulin action. Diabetes is a lifelong disease with a high incidence. This paper provides mental health information of patients with diabetes by means of standardized psychological measurement tools, taking into account the patients' natural conditions and disease characteristics, including family, education level, medical history, weight, psychological state and other factors. Psychological effects were evaluated and combined on the basis of conventional treatment and their effects were compared. The results of statistical analysis in this paper showed that the change of anxiety score after psychotherapy had significant difference (P <0.01), and the depression score after psychotherapy was significantly lower than that before psychotherapy (P <0.01). The results showed that psychotherapy intervention can be combined with antidepressant treatment to reduce depressive symptoms, relieve depressive mood, reduce psychological stress and improve blood glucose metabolism. Therefore, it can effectively reduce the suffering of patients, increase the confidence to cure the disease, improve the quality of life, and reduce depression to varying degrees.

1. Introduction

Psychosocial factors have a continuous impact on the occurrence, development and outcome of diabetes. Meanwhile, chronic diabetes also causes complex psychological changes and psychological problems in patients. Diabetes, chronic hyperglycemia, serious complications, complex etiology and pathogenesis, often cannot be cured. In addition to hypoglycemic treatment, we strictly controlled diet, regularly participated in blood glucose monitoring and diabetes education courses, carried out physical exercise for some patients, and injected insulin every day. As a result, when a patient develops diabetes, lifestyle changes and the financial burden of

long-term treatment are a negative life event for the patient. It threatens the mental health of patients and brings them many psychological problems.

In 2017, 4 million people worldwide died from diabetes [1]. In less than half a century, the prevalence of diabetes in China has steadily increased from 0.67% in 1980 to 10.9% in 2013 and 11.6% in 2017 [2]. Although people have known about diabetes for hundreds of years, in the process of fighting, various treatment methods have been applied in clinical practice, and according to the development of clinical psychology, psychotherapy has begun to treat various types of diabetes [3]. It has become an important part of the treatment. Therefore, it is of certain practical significance to pay attention to the physical and mental health of diabetic patients and to improve the quality of life of diabetic patients with the ultimate goal, which has become one of the hot topics in the current medical clinical psychology research [4].

In a recent study, Nagarajan believes that the proportion of negative emotions in diabetic patients is close to the proportion of other physiological complications, and the proportion of negative emotions in diabetic patients has reached 60% [5]. It is pointed out that the research on the development mechanism of negative emotions is mainly divided into neurophysiological factors and social psychological factors. The former is relatively well-studied and controversial, but the conclusions of most studies are consistent, and Lei Zhao's hypothalamic-pituitary-adrenal axis team regulation imbalance theory is relatively accepted [6]. The research of the latter is mainly the results of the cognitive and behavioral schools, which accept the cognitive theory and the theory of powerlessness of Julio Cesar Martin [7]. However, other psychological schools, such as psychoanalysis and humanism, hold a negative attitude and lack of emotional mechanism. Psychotherapy is not an important way to treat illness today. In the 2nd century BC, ancient Greece and Egypt began to use hypnotic suggestion to treat certain diseases [8]. In the past 50 years, psychotherapy has become more and more important as it has made great progress in theory and treatment techniques as well as in the application of negative emotion therapy in diabetes mellitus [9]. In addition, biofeedback therapy and morita therapy have been used in clinical practice, but the research on these treatments is not enough. Quality of life is one of the concepts introduced into the medical field in the last century [10]. Most studies have found that diabetics with negative emotions support the idea that quality of life in all dimensions suffers to varying degrees. In China, more and more studies have been conducted in recent years, which indicates that China starts to pay attention to the quality of life of diabetic patients [11]. In terms of the evaluation method, one is the subjective evaluation of the evaluation while focusing on the evaluation of the objective state of life, and the other is from the same one-dimensional evaluation to the multidimensional evaluation. Third, from a single special group evaluation tool to a general group evaluation tool [12].

This paper provides mental health information of patients with diabetes by means of standardized psychological measurement tools, taking into account the patients' natural conditions and disease characteristics, including family, education level, medical history, weight, psychological state and other factors. Psychological effects were evaluated and combined on the basis of conventional treatment and their effects were compared. The results of statistical analysis showed that the change of anxiety score after psychotherapy had significant difference (P <0.01), and the depression score after psychotherapy was significantly lower than that before psychotherapy (P <0.01). The results showed that psychotherapy intervention can be combined with antidepressant treatment to reduce depressive symptoms, relieve depressive mood, reduce psychological stress and improve blood glucose metabolism. Therefore, it can effectively reduce the suffering of patients, increase the confidence to cure the disease, improve the quality of life, and reduce depression to varying degrees.

2. Diabetes and Its Treatment

2.1. Epidemiological Characteristics of Diabetes Mellitus

Diabetes mellitus (DM) is a clinical syndrome of persistent hyperglycemia caused by a combination of genetic, autoimmune, and environmental factors. At present, China's aging speed is still accelerating, there is no doubt that with the large number of healthy elderly diabetes patients increasingly prominent, treatment has become a serious challenge for China's public health undertakings.

Diabetes seriously affects the quality of life and physical health of Chinese people, such as complications caused by multi-system damage, causing special eye, kidney, chronic damage and neurological disorders. More than 100,000 Chinese die of diabetes each year, but life expectancy is also directly affected by the disease: the total loss per capita in China is 0.15 years. Therefore, the early prevention and treatment of diabetes, as soon as possible to solve the national people's interests should be the focus of attention in China. In long-term clinical practice, people gradually refer to not only the previously known lethal factors of diabetes, but also the important role of psychological stress factors. The occurrence and development of diabetes mellitus are closely related to pathology. Therefore, in the prevention and treatment of diabetes, the background transformation of medical model and psychological factors should be the focus of daily attention.

2.2. Relationship between Mental Health and Quality of Life

Mental health is a special part of modern society. It is very important to the health of individuals. In China, with the rapid development of modern society, the development of economy, science and technology as well as social humanities are more or less influenced by foreign ideas. As people are gradually liberated from the bondage of family and become another subject of social work, they are faced with diversified problems and challenges. The accompanying psychological problems make people more vulnerable and further encounter big problems. In recent decades, a growing number of sociologists have focused on mental health due to the multiple shifts in the roles of social identity and the inherent differences in the physical structure of men and women.

Another pressing issue for diabetics is mental health. The patient is not only a real "living person", but also a "worker" with thoughts and feelings, complex psychology and emotions. A person's mental state and mental state more or less affect his current health status and quality of life. On the other hand, the patient's own psychological state plays an indispensable role in all stages of the disease. The reliability of the patient's medical care and the reliability of the doctor will also affect the therapeutic effect of the disease. These are sufficient to describe the subjective attitudes and cognitive health status of patients affected by the disease. Diseases not only bring problems and defects to an individual's body, but also involve various fields such as physiology, psychology and content, such as psychology and emotion. Changes in one's mental state and mental state affect the progress of physical illness, and changes in one's physical state also affect mental and emotional states. The theory and concept of "body correlation" or "body interaction" has been widely accepted by scholars, who believe that the physical illness of an individual always has its psychological origin. Psychological factors delay the development of the disease, and similar principles lead to the development of the disease. When patients are diagnosed with diabetes, they have a series of special psychological characteristics, such as doubt, denial, anger, disappointment, helplessness, anxiety, depression and anxiety. Since the disease needs to be treated for a long time, it is not only necessary to change daily habits but also to resist the temptation of high-sugar foods. At the same time, a large

amount of money is spent on treatment, which is bound to cause a heavy psychological burden, which will naturally increase the burden on the family. Some seriously ill patients will also suffer from negative suicide and anorexia.

Quality of life is an indicator, which represents a person's subjective feeling towards his own health and living conditions. It is one of the fields where quality of life is closely related to mental health. As a rich indicator of understanding of the concept of quality of life, it includes many aspects, such as self-reliance, social relations, physical and mental health, and so on. Mental health refers to the continuous and positive development of mental state. In this positive state, patients make appropriate adaptive behaviors and activities to give full play to their physical and mental potential. Type I and type II diabetes pose major psychological and physical challenges to patients and their families. It interferes with the quality of life of patients and their families and is a risk factor for some psychological disorders related to diabetes. Problems with diabetes diagnosis are related to improving quality of life and adherence to treatment policies, such as psychosocial distress in individuals and relationships. Management strategies for diabetes should include a treatment for the disease to reduce the inconveniences of individuals and family members of the psychosocial community. The treatment goal of diabetes is not limited to the control of blood glucose and other biochemical indicators, and it is impossible to control the development of the disease, reduce the occurrence of accompanying diseases, promote the mental health of patients, and improve the quality of life. All of these are therapeutic goals.

2.3. Psychological Factor Pathogenic Theory Model of Diabetes Mellitus with Depression

Strict dietary regime, daily treatment requirements, increased financial burden, and repeated hospitalization may lead to depression, which is a source of stress for diabetics. A person's cognitive evaluation system the development of stressful events and emotional responses, and depression, depends on the individual's situation and evaluation of stressful events, which is based on the individual's beliefs, assumptions, and methods of thinking. And so on. Therefore, the depression of diabetic patients is caused by the bias of cognitive evaluation of the facts of the condition and a series of related life events. There are five common cognitive distortions:

(1) Arbitrary reasoning: it is easy to draw a conclusion when there is insufficient or insufficient evidence.

(2) Selective summary: summarize the whole event without considering other situations and only consider individual details.

(3) Over-guidance: to draw a general conclusion about an operation or value on a case-by-case basis, i.e. to draw a general conclusion from a particular event.

(4) Exaggeration and reduction: distortion of the significance of evaluating the objective situation.

(5) "All or Nothing" thinking: that is to say, there are absolute right and absolute wrong judgment of things, see life as a single color in the world, there is no neutral.

2.4. Intervention Methods for Type 2 Diabetes Patients with Depression

Cognitive therapy is one of the most widely used psychotherapy in the world today. As individuals' views and views on things directly or indirectly affect their emotional and behavioral expression, cognitive level is emphasized in the treatment, and cognitive correction and change of emotional and behavioral expression are carried out. Behavior can be improved over time. Cognitive therapy involves a highly structured, organized approach, and passive automation of how

thoughts and beliefs are evaluated. It is the knowledge and cognitive object of correcting these biases. It is believed that the cognitive evaluation system of the parties exists between stress and emotional response, and the occurrence of negative emotions results from abnormal and distorted thoughts generated by the evaluation system. In addition, the abnormal behavior of emotional disturbance has been recognized that the relationship between the two is distorted, and people with emotional disturbance and abnormal behavior are considered to be stimulated by the objective environment or the outside world. However, cognition highlights the mediating role between the two. In the process of personal growth, the evaluation of each person is different, what is going on around us, explanations and attitudes, people will have different views.

The main way of supporting psychotherapy is non-drug therapy, which plays an important role in preventing the occurrence and development of diabetes. Assistive technology, encouragement, and the promotion of environmental improvement, the principle is to provide the necessary psychological support for the patient, care and compassion, comfort and encouragement, treatment, etc. For chronic psychosomatic diseases, such as type 2 diabetes, it is often seen as a basis for assistive technology or other psychotherapy techniques, not just a support technique.

Behavior therapy is one of the most influential factions in modern psychotherapy. The purpose of behavioral therapy is to eliminate maladaptive behavior, change or form new behavior, or both. The therapy is mainly used to change patients' bad behavior patterns. Relaxation and biofeedback are typical treatments. Relaxation therapy regulates autonomic nervous system function by suggesting or changing muscle tone, inducing muscle relaxation and psychological balance. Relaxation therapy is mainly applied to the state of concentration, because tension and relaxation are opposites, that is, the relaxed body does not have the state of concentration; Biofeedback therapy is a combination of relaxation therapy. Through modern electronic devices, some physiological activities of the patient's body, such as biological information, electromyography, skin temperature, heart rate, blood pressure and electroencephalogram, are recorded at the same time as sound, light and screen conversion images. Intuitive feedback signals, such as one feedback after another from the patient, regulate the physiological function of the body, maintain the physiological function, and restore the physiological function is an appropriate level.

3. Research Objects and Data Collection

3.1. Subjects

(1) Inclusion criteria for experimental subjects

The selection criteria were psychological survey and questionnaire survey on the patients and their families who received diabetes treatment for three consecutive months. 64 patients with SDS and scl-90 score greater than 40 were selected, and 60 patients who met the standards were finally selected and signed a written agreement of informed consent with the patients.

(2) Exclusion criteria for research objects

Among the 64 patients, except for 2 patients who were too sick to continue the interview and questionnaire survey, the final statistical analysis of 60 patients, 2 patients could not complete the questionnaire and the questionnaire was invalid, the effective rate was 93.75%. About 6 percent of diabetics and their families do not fully understand and accept scientific research and psychological cues.

(3) Inclusion criteria for research objects

According to the questionnaire evaluation results at the time of enrollment, the scores of SDS or SAS were more than 40 points, and there were 60 psychological treatment requisitions in the

clinical psychotropic drug treatment group (before treatment). The SAS, SDS and scl-90 questionnaires of 60 patients after psychological intervention and drug therapy were reevaluated and compared.

3.2. Data Sources

(1) Basic situation questionnaire: half open questionnaire design, including age, marital status, position, education level, working time, bad habits, work pressure, physical and mental health, a traumatic event, as well as clinical diabetes onset time and excerpts from medical records of the testing indexes, including fasting plasma glucose (FPG), blood sugar 2 hours after meal (2 HPG) and glycosylated hemoglobin (HbA1C) 3 laboratory monitoring index and various kinds of complications, and so on 29.

(2) Depression Self rating scale (Self - Rating Depression Scale, SDS) : SDS is the revision of the Self assessment questionnaire, a total of 20 items, according to the frequency of the symptoms score, divided into time or less and less time, more time, most or all of the four grades. The test results are scored according to the standard, the normal upper limit of the total score is 40 points

3.3. Data Processing

In this experiment, SPSS 10.0 statistical software was used to establish the SPSS database, and the results were analyzed and evaluated. Statistical description, t test and correlation test were performed for all explanatory variables and response variables, and the significance level was set as 0.05.

4. Result Analysis of Psychological Intervention Experiment

4.1. Relationship between Diabetes Depression and Psychosocial and Physiological Factors

The subjects of this study were 60 patients with type 2 diabetes who had no previous history of mental illness, as shown in Table 1. Among the 60 patients with diabetes, the ages ranged from 54 to 76 years old, with an average of 68.93 years old. There were 14 males and 46 females. There are 28 urban residents, 28 from primary school to university, 28 from primary school, 28 from junior high school and 4 from university. The course of diabetes varies from 1 to 18 years. There were 28 patients with associated diseases (including limb paresthesia, lower limb tension, postural hypotension, hypertension, coronary atherosclerosis, diabetic retinopathy, plant-type bladder, diabetic nephropathy, cerebral thrombosis or cerebral hemorrhage), and 2 patients with associated diseases. The average monthly income ranges from 600 yuan to 2,000 yuan. Marital status: 58 married, 2 divorced. Fasting blood glucose was 4.8 ~ 12.0 mmol/L, postpranemic blood glucose was 7.0 ~ 16.0 mmol/L, and hba1c was 5.8 ~ 13.2%. Eight were suicidal and 52 were not.

Diabetes patients with depression, anxiety and other psychological disorders, the conclusion is positive. In addition, various stress reactions and psychological trauma promote the development and development of diabetes, seriously affect the clinical treatment and prognosis of diabetes, diabetes itself will also cause or aggravate depressive symptoms. To analyze and compare the correlation between the blood glucose metabolism indexes and the factors of impatience, depression and self-assessment of symptoms in each group. Explain the fasting blood glucose and postprandial blood glucose, glycosylated hemoglobin, and the symptoms of self-assessment scale factors associated with a significant impatience, symptoms, is more likely to lead to depression, eating less

and lower blood sugar level, 60 cases of patients with type 2 diabetes, blood sugar and self-evaluation of symptoms, depression and anxiety scale correlation of each factor of the test results are shown in Figure 1 and Figure 2.

Table 1. Description of demographic variables in 60 patients with type 2 diabetes

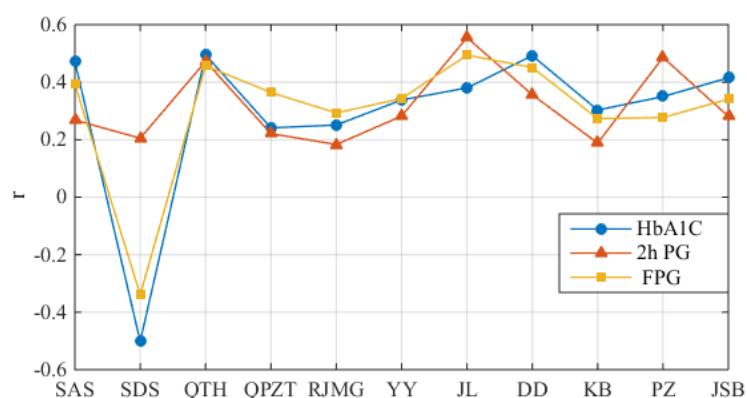| Variable	MIN	MAX	X±S	M
Age (year)	54.00	76.00	68.93±5.54	-
Education Level (year)	5.00	18.00	12.00±4.05	-
Monthly Income (yuan)	600.00	2000.00	-	900
Course of Disease (year)	1.00	18.00	-	7.5
Weight (kg)	40.00	100.00	66.50±14.64	-
Height (cm)	150.00	175.00	160.87±6.10	-
Fasting Blood Glucose (mmol/L)	4.80	12.00	8.07±1.75	-
Postprandial Blood Glucose (mmol/L)	7.00	16.00	11.33±2.37	-
Hbalc (%)	5.80	13.20	9.04±1.95	-

Figure 1. Correlation Test Results of Blood Glucose with Various Factors of Anxiety, Depression and Symptom Self-rating Scale in Diabetic Patients (r)
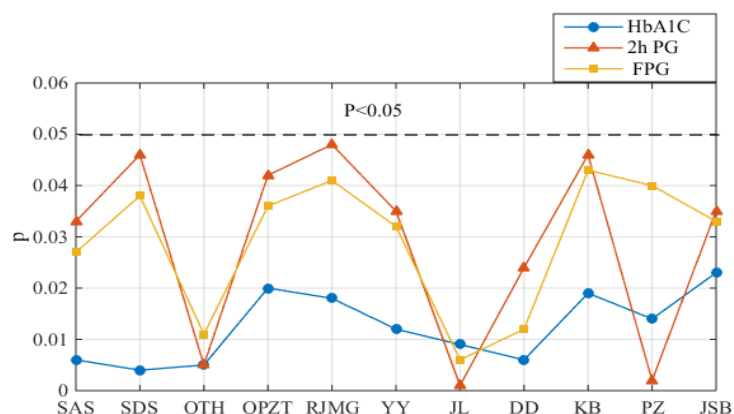

Figure 2. Correlation Test Results of Blood Glucose with Various Factors of Anxiety, Depression and Symptom Self-rating Scale in Diabetic Patients (P)

Can see from the table, the variable between descriptive statistical analysis results show that when the correlation between glucose metabolism index including variables and risk factors, including patient demographic characteristics and risk factors and disease, for example, age, income, education level, drinking, disease, diabetes, peripheral nerve function, eye and body function, compulsive condition, human relations, hostility, terror, paranoia, psychosis, etc.

The characteristics associated with SAS are gender, marriage, education, comorbidities, depression, blood sugar, ideology, physique, compulsion, interpersonal relationships, hostility, paranoia, fear, and psychosis. The diseases associated with SDS include age, sex, marriage, parenting status, education level, comorbidity, impatience, blood sugar, ideology, physique, obsessive-compulsive disorder, interpersonal relationship, hostility, paranoia, fear, psychosis, etc. Age was positively correlated with suicide intention, blood glucose and constitution. The older you get, the more likely you are to have suicidal thoughts, and the higher your blood sugar, the more obvious your symptoms. Gender is associated with impatience, depression, and obsessive-compulsive symptoms, and women are more likely than men to have symptoms of impatience, depression, and obsessive-compulsive symptoms. The scores of depression and depression self - rating scale were positively correlated with each factor of symptom self - rating scale.

4.2. Patients with Diabetes before and After Auxiliary Psychological Intervention

The analysis of SAS and SDS evaluation results of 60 patients with type 2 diabetes before and after treatment is shown in Figure 3. The paired t test was used for statistical analysis, and the results showed that there was a significant difference between the total anxiety score before and after treatment (P<0.01). The paired t test was used for statistical analysis, and the results showed that depression score was significantly lower after intervention than before intervention (P<0.01).
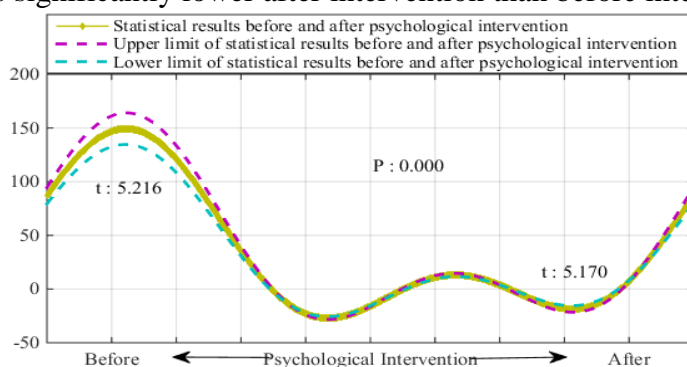

Figure 3. SAS and SDS Evaluation Results of 60 Patients with Type 2 Diabetes Before and After Treatment

T-test statistical analysis of scl-90 evaluation results of type 2 diabetes patients before and after treatment is shown in Figure 4. The results show that the scores of somatization symptoms, compulsion, interpersonal relationship, hostility, terror, paranoia, and psychosis of diabetes patients before and after treatment have highly significant differences except interpersonal relationship. It shows that interpersonal relationships are formed in the long-term living environment and are not affected by diseases.
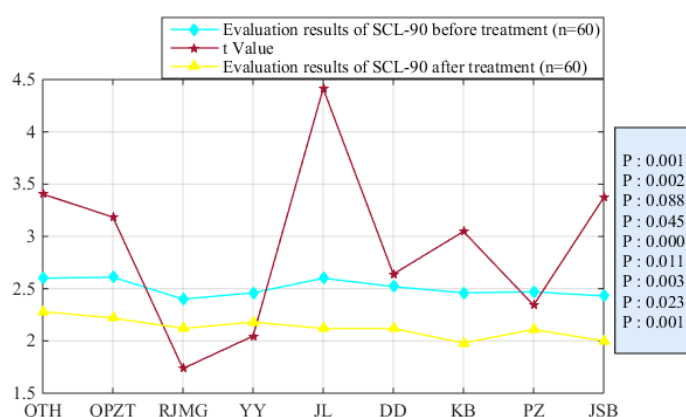
Figure 4. Statistical Analysis of t Test of Evaluation Results of SCL-90 in Patients with Type 2 Diabetes before and After Treatment

The analysis results showed that the changes of anxiety score after intervention were significantly different (P<0.01), the depression score was significantly lower after intervention than before intervention, and the difference was significant (P<0.01). All factors of scl-90 had significant differences except interpersonal relationship (P<0.05). It shows that comprehensive intervention treatment can greatly improve the depressive symptoms and physical state of patients with diabetes. The results of statistical analysis before and after auxiliary psychological intervention and drug treatment in diabetic patients showed that the depression score after intervention was significantly lower than that before the intervention, with significant difference (P<0.01), the change of anxiety score after intervention was significantly different (P<0.01), and all factors of scl-90 except interpersonal relationship had significant difference.

5. Conclusion

Diabetes is an endocrine and metabolic disease, which is caused by insufficient secretion or poor insulin action. Diabetes is a lifelong disease with a high incidence. Many related diseases are one of the diseases that seriously endanger human health and lead to human death. In recent years, the economy develops rapidly; the living standard improves, the population ages, the number of diabetes patients increases rapidly. Diabetes is a psychosomatic disease, the cause of which has both psychological and physiological factors. Psychological intervention is needed in the treatment of diabetes. Research suggests that for people with diabetes with a mental illness, a combination of conventional and psychological treatments may be more effective than medication.

This paper provides mental health information of patients with diabetes by means of standardized psychological measurement tools, taking into account the patients' natural conditions and disease characteristics, including family, education level, medical history, weight, psychological state and other factors. We evaluated and combined psychotherapy on the basis of conventional therapy and compared its effects. Based on the investigation of natural conditions and demographic data, this paper adopted scl-90, SAS and took type 2 diabetes patients from the world health organization as the research object. The diagnostic criteria of diabetes, SDS and the self-rating scale of irritable depression were divided into 40 reference lines. The drug of choice was seret, a serotonin receptor antagonist. At the same time, receive regular diabetes treatment, including diet, exercise, diabetes self-management education, and take medication (oral medication and/or insulin) to observe the efficacy. Then the psychological scale was reevaluated and scored, and the data were

statistically processed and analyzed.

This paper provides mental health information of patients with diabetes by means of standardized psychological measurement tools, taking into account the patients' natural conditions and disease characteristics, including family, education level, medical history, weight, psychological state and other factors. Psychological effects were evaluated and combined on the basis of conventional treatment and their effects were compared. The results of statistical analysis showed that the change of anxiety score after psychotherapy had significant difference (P <0.01), and the depression score after psychotherapy was significantly lower than that before psychotherapy (P<0.01). The results showed that psychotherapy intervention can be combined with antidepressant treatment to reduce depressive symptoms, relieve depressive mood, reduce psychological stress and improve blood glucose metabolism. Therefore, it can effectively reduce the suffering of patients, increase the confidence to cure the disease, improve the quality of life, and reduce depression to varying degrees.

Funding

This article is not supported by any foundation.

Data Availability

Data sharing is not applicable to this article as no new data were created or analysed in this study.

Conflict of Interest

The author states that this article has no conflict of interest.

References

[1] Fen XUE, & Fang HUANG. (2018). "The Effect of Psychological Intervention on Nutrient Status of Perioperative Patients with Lung Cancer", Iranian Journal of Public Health, 47(4),pp. 531-537.

[2] Shun-Xi Chen, & Fei-Fei Liu. (2018). "Effect of Tiaoshen Kaiyu Acupuncture (Regulating Vitality and Dredging Stasis) Combined with Psychological Intervention on Patients of Mild Depression After Stroke", Acupuncture Research, 43(1),pp. 39-43.

[3] Shen, X., Zhu, X., Wu, Y., Zhou, Y., Yang, L., & Wang, Y., et al. (2018). "Effects of A Psychological Intervention Programme on Mental Stress, Coping Style and Immune Function in Percutaneous Coronary Intervention Patients",Plos One, 13(1),pp. e0187745. https://doi.org/10.1371/journal.pone.0187745

[4] Alvin Richards-Belle, Paul R Mouncey, Dorothy Wade, Chris R Brewin, & Kathryn M Rowan. (2018). "Psychological Outcomes Following a Nurse-led Preventative Psychological Intervention for Critically Ill Patients (poppi): Pprotocol for a Cluster-randomised Clinical Trial of a Complex Intervention",Bmj Open, 8(2),pp. e020908. https://doi.org/10.1136/bmjopen-2017-020908

[5] Nagarajan, P., & Thappa, D. M. (2018). "Effect of an Educational and Psychological Intervention on Knowledge and Quality of Life among Patients with Psoriasis", Indian Dermatology Online Journal, 9(1),pp. 27-32. https://doi.org/10.4103/idoj.IDOJ_111_17

[6] Lei Zhao, Yan-fei Wu, Yao Gao, Huan Xiang, & Jun-sheng Tian. (2017). "Intervention Mechanism of Psychological Sub-health by Baihe Dihuang Tang based on Network Pharmacology", Acta Pharmaceutica Sinica, 52(1),pp. 99-105.

[7] Julio César Martń, Ascensión Garriga, Egea, C., Diaz, G., Marú Josefa Campillo, & Rosa Marú Espinosa. (2017). "Stepped Psychological Intervention with Common Mental Disorders in Primary Care", Anales De Psicologia, 34(1),pp. 30-40. https://doi.org/10.6018/analesps.34.1.281491

[8] Miguel Barboza Palomino, & Tomás Pedro Pablo Caycho Rodríguez. (2017). "Comprehensive Intervention in Obese People: Lack of Psychological Tools", Revista Cubana de Salud Publica, 43(1),pp. 114-116.

[9] Álvaro I. Langer, Schmidt, C., Rocó Mayol, Marcela Díaz, Lecaros, J., & Krogh, E., et al. (2017). "The Effect of a Mindfulness-based Intervention in Cognitive Functions and Psychological Well-being Applied as an Early Intervention in Schizophrenia and High-risk Mental State in a Chilean Sample: Study Protocol for a Randomized Controlled Trial", Trials,18(1),pp. 233. https://doi.org/10.1186/s13063-017-1967-7

[10] Timothy R. Broady, & Rebecca M. Gray. (2017). "Taking Responsibility: Psychological and Attitudinal Change Through a Domestic Violence Intervention Program in New South Wales, Australia", International Journal of Social Science Studies, 5(6),pp. 68. https://doi.org/10.11114/ijsss.v5i6.2321

[11] Deval, C., Bernard-Curie, S., & Jean-Louis Monestès. (2016). "Effects of an Acceptance and Commitment Therapy Intervention on Leaders' and Managers' Psychological Flexibility", Journal de Thérapie Comportementale et Cognitive, 27(1), 34-42. https://doi.org/10.1016/j.jtcc.2016.10.002

[12] Evelia Franco, & Javier Coterón. (2017). "The Effects of a Physical Education Intervention to Support the Satisfaction of Basic Psychological needs on the Motivation and Intentions to be Physically Active", Nephron Clinical Practice, 59(1),pp. 5-15. https://doi.org/10.1515/hukin-2017-0143