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PSYCHOLOGICAL CONSEQUENCES OF DIABETES MELLITUS ON PATIENTS' EMOTIONAL WELL-BEING AND DAILY LIFE ADJUSTMENTS

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Abstract

An individual's physical, social, emotional, and psychological well-being can be impacted by diabetes, a chronic metabolic disease.Diabetes patients frequently face psychological difficulties that, if left untreated, have a significant detrimental influence on their social and general well-being.Diabetes mellitus of either type 1 or type 2 is more commonly connected to anxiety, depression, and eating disorders.Diabetes-related mental health complications make it more difficult to adhere to treatment regimens, which increase the risk of catastrophic both the short- & long-term issues like amputation, blindness, stroke, diminishedlifestyle quality, cognitive decline, & early death. The fundamental goal of patient maintenance for diabetes is self-care, therefore addressing the psychosocial aspects

of treatment, such as intellectual, emotional, behavioural, & social issues, would help remove the psychological obstacles to adherence. The current review consequently looks at the emotional and psychological requirements of diabetes patients and stresses the role of diabetologists, mental health specialists, and clinical psychologists in easing the challenges these patients experience.

INTRODUCTION

In the UK, almost 3.2 million persons received a diagnosis of diabetes in 2019; with type 2 diabetes accounting for about 90% of those diagnoses (NICE, 2022). Because more people are vulnerable to having diabetes, number of diabetics in the United Kingdom is predicted to climb to 5.5 million by 2030 (Diabetes UK, 2022). Hyperglycaemia, a condition caused by high blood glucose levels (hyperglycaemia) brought on by insulin resistance and insufficient pancreatic insulin production, is a complication of diabetes (NICE, 2022). Diabetes incidence rates have increased globally during the past thirty years, affecting nations of all income levels (WHO, 2022). Diabetes raises people's risk of developing cardiovascular disease and causes more than 22,000 more deaths annually, placing a greater financial load on the NHS and adding over £10 billion in annual expenditures (NHS, 2019). In order to increase "assisted self-management to prevent psychological impact," the NHS Long Term Plan includes diabetes and other chronic health disorders (NHS, 2019).

To stop long-term issues from getting worse, type 2 diabetes treatment is crucial. Damage to a variety of systems, such as the heart, kidneys, blood vessels, eyes, and nerves, can result in long-term consequences that can have a serious influence on one's health (WHO, 2022). Primary care will still receive funding that will assist with recommended targets in order to lower the likelihood of subsequent issues and psychological problems (NHS, 2019).

Diabetes-related depression is particularly prevalent in adult patients. Diabetes patients have a 2x higher rate of depression than people without the disease (Anderson et al., 2001). Control of blood sugar is directly impacted by depression. This may be brought about by depression's impact on diabetes self-management as well as its impact on blood sugar control via neuroendocrine pathways, according to theories. Depression frequently coexists with other emotional disorders including anger and anxiety. According to some reports, up to 40% of those with diabetes also experience anxiety (Grigsby et al., 2002; Lloyd et al., 2000).

The emotional complications of diabetes are not addressed by diabetes self-management programmes, despite their effectiveness. According to the literature, the observation that persons with diabetes reported experiencing depression and anxiety

makes sense. In most diabetic self-management programmes, there is a section where self-care methods for depressive symptoms are briefly discussed in particular, but their main focus is not on the evaluation and management of these symptoms. Therefore, the goal of the research is to comprehend the depressive, anxious, and angry emotions that people with type two diabetes experiences, In addition to effects that these emotions have on their general quality of life.

Anxiety and Diabetes

Many people who have diabetes also have concomitant anxiety disorders such posttraumatic stress disorder, panic disorder, and generalised anxiety disorder. People with diabetes who do not have concomitant depression are nevertheless susceptible to anxiety disorders (Katon&Feltz-Cornelis, 2010). When type 1 and type 2 diabetes mellitus is first discovered and when its complications first appear, people with those conditions may experience increased anxiety (Anderson, 2007). At least three methods exist where anxiety problems make managing diabetes and having diabetes more difficult: Severe panic or anxiety disorders may develop after receiving a diabetes diagnosis as a result of prior worry related to injections or blood samples; Because fear of diabetes is a common source of acute anxiety, it can be challenging for someone with diabetes to distinguish between worrying feelings and symptoms that need immediate treatment, can make this distinction difficult. Additionally, type 1 diabetic parents are more likely to have severe hypoglycaemia anxiety.

Depression and Diabetes

From over past 20 years, there have been substantial advances that have improved our knowledge of the scientific basis for connection between depression & insulin resistance. Both major depressive disorder and type 2 diabetes increase the risk of the disease. Major depressive disorder raises the possibility of diabetes. This association between the two conditions may be reciprocal (Gonzalez, 2013). As a separate condition from major depressive disorder, diabetes distress is now being acknowledged. Diabetes misery arises from the fact that almost every diabetic treatment requires self-management behaviour, requiring the patient and family to balance a number of behavioural responsibilities 24 hours a day, seven days a week, with no "off" days. The many insulin dosages needed for type 1 diabetes each day and night must be adjusted based on the continuous monitoring of blood glucose levels. This is countered by choices about food and exercise that affect blood glucose levels, most promptly to prevent hypoglycaemia, which can result in coma and seizures.

In addition, 6.7% of US individuals aged 18 or older suffer from major depressive disorder1 and those with diabetes are more likely to have their condition identified.

Diabetes patients of either type 1 or type 2 experience depressions at rates that are, on average, twice as high as those of the general population (Gonzalez, 2013). Compared to adolescents without the condition, adolescents with type 1 diabetes have greater rates of depression, finds a 2011 meta-analysis; however, the variations are not as significant as those seen in earlier research. Premature mortality and poor mental and physical health outcomes are particularly common among young individuals with type 1 diabetes (Gonzalez, 2013).

Eating Disorder and Diabetes

Compared to women without type 1 diabetes, women with diabetes had a 1.9-fold higher risk of having sub threshold eating disorders and a 2-fold higher risk of acquiring eating disorders altogether (Goebel, 2013). Eating problems in boys and men having diabetes are a subject that receives less research. When women with type 1 diabetes have disrupted eating patterns, they may binge eat or flush calories through insulin restriction and rates of these behaviours have been shown to occur in 31% - 40% of women having type 1 diabetes mellitus with the age range of 15 to 30. Additionally, disordered eating habits endure and get worse with time. When compared to type 1 diabetic ladies who are around the same age who do not have eating disorders, women with eating disorders had worse glycaemic control, greater rates of hospitalisations, retinopathy, neuropathy, as well as premature death (Goebel, 2013).

Other Psychological Disorders

Other psychological conditions cause PWD to have unique issues (Rubin &Peyrot, 1992).Abuse of drugs and schizophrenia might make it difficult for a patient to control their diabetes. Because alcohol prevents the liver from storing and releasing glucose to maintain glucose homeostasis, alcoholism may have unintended consequences (Saudek et al., 1997).Patients with obsessive-compulsive disorder may constantly check their blood sugar levels, with little improvement in glucose control. Phobias can make it difficult to inject oneself and stick your fingers for blood glucose monitoring. The majority of mental health specialists are unlikely to come across these problems in association with diabetes, according to the psychiatric literature, which indicates that they are uncommon. However, because this will have significant health repercussions, it is crucial to take into account how these and other psychological illnesses impair diabetes self-management while treating PWD with these and various psychiatric disorders.

As we've seen, PWD are more likely to experience a range of clinical problems. For people with disabilities (PWD) and the professionals in mental health who treat them, these disorders present unique obstacles. Diabetes-related pressures can exacerbate

subclinical emotional distress. The self-care routine for diabetes is difficult, persistent, and uncomfortable. Nevertheless, despite these requirements, adhering to the regime does not ensure that difficulties will not arise or that blood sugar levels will be close to normal. These diabetes-related realities have emotional repercussions.

PWD typically express their frustration, annoyance, overwhelm, or burnout. Or perhaps they say they feel fearful, angry, or guilty all the time. Problems with living with diabetes are a factor in this misery, even though other areas of life undoubtedly play a role. Distress brought on by difficulties managing diabetes can start a chain reaction that results in decreased motivation, passive self-care, higher blood sugar levels, a higher risk of complications, and a lower lifestyle quality.

The Problem Areas In Diabetes (PAID) questionnaire was created by Polonsky and his associates to determine the causes of emotional anguish brought on by diabetes (Welch et al., 1997; Polonsky et al., 1995).They discovered that emotional suffering due to diabetes was widespread and that less distress was linked to better long-term glucose control, more active diabetic self-care, and fewer short- and long- term problems. General emotional distress, disordered eating, and emotional distress related to diabetes were also linked. This shows that addressing issues related to diabetes management may have a wider range of positive effects.

The PAID tool was created to record diabetes-related issues that were frequently brought up in psychological counselling for people with diabetes. These issues can be divided into three groups: diabetes-related interactions with loved ones, friends, and medical professionals; everyday parts of self-care, such as nutrition, blood monitoring, or medication; and blood glucose swings and their effects. There are several frequent generic difficulties in each area, as well as a far greater number of unique problems.

Diabetic Comorbid Mental Health Screening

Only around one-third of individuals with these concomitant illnesses receive a treatment and diagnosis despite the potential harm that mental health issues may cause to diabetes outcomes and healthcare costs. Prevailing medical guidelines established by the American Diabetes Association state that "people with diabetes should get medical treatment from a team that may include doctors, nurse practitioners, physician's assistant, nurses, nutritionists, pharmacists, and mental health specialists with experience in diabetes (American Diabetes Association, 2014)"; but only, a small number of diabetes clinics offer mental health screenings or include mental/behavioural health treatments into clinical care for diabetes. Standardized diagnosis interviews cannot be used to accurately identify mental health complications in people with diabetes because they are neither practical nor inexpensive. Although they are useful in diabetic clinical settings,

short paper-and-pencil self-report tests, such the Beck Depression or perhaps the Canter for Disease and Control, are still infrequently used to screen for depressed symptoms.

Conclusion

Diabetes patients are much more likely to experience typical mental illnesses like anxiety, depression, eating disorders and such other problems. Diabetes distress is experienced by a much higher percentage of patients in reaction to the burden of the disease and their perceived dangers from the condition. Cognitive dysfunction can range in severity from very mild to very severe in diabetic patients. For the treatment of diabetes-related anxiety and mental health problems, psychological therapies and counselling techniques have been created or modified in along with medical management. Findingand treating the psychological health comorbidities among diabetes patients should be a top priority from the perspectives of economics, public health, and humanitarianism. As they go through a number of transitionsgeographic, social, and between paediatric and adult carethat could put them at risk for missing out on medical follow-up and having poor health outcomes, young people with diabetes are particularly susceptible to mental health comorbidities.

References

American Diabetes Association. (2014). Standards of medical care in diabetes—2014. *Diabetes Care.* 37(suppl 1):S14–S80.

Anderson BJ, Mansfield AK. (2007). Psychological issues in the treatment of diabetes. In: Beaser RS, editor. *Joslin's Diabetes Deskbook.* 2nd ed. Boston, MA: Joslin Diabetes Center. pp. 641–661.

Anderson RJ, Freeland KE, Clouse RE, Lustman PJ. (2001). The prevalence of comorbid depression in adults with diabetes: a metanalyses. *Diabetes Care.* 23:1069–1078.

Diabetes UK, (2022). How to deliver best practice in diabetes care across Primary Care Networks. Available at:http://www.diabetes.org.uk/professionals/resources/shared-practice/primary-and- community-care/pcn-delviery-of-care. (Accessed: 16 June 2022).

Goebel-Fabbri AE. (2013). Eating disorders. In: Peters A, Laffel L, editors. *Type 1 Diabetes Sourcebook.* Alexandria, VA: American Diabetes Association. pp. 180–186.

Gonzalez JS. Depression (2013). In: Peters A, Laffel L, editors. *Type 1 Diabetes Sourcebook.* Alexandria, VA: American Diabetes Association. pp. 169–179.

Grigsby A, Anderson R, Freedland K, Clouse R, Lustman P. (2002). Prevalence of anxiety in adults with diabetes: a systematic review. *J Psychosom Res.* 53:1053–1060.

Katon W, Feltz-Cornelis CVD (2010). Treatment of depression in patients with diabetes: efficacy, effectiveness and maintenance trials and new service models. In: Katon W, Maj M,

Sartorius N, editors. *Depression and Diabetes.* Hoboken, NJ: John Wiley & Sons. pp. 81–107.

Lloyd CE, Dyer PH, Barnett AH. (2000). Prevalence of symptoms of depression and anxiety in a diabetes clinic population. *Diabet Med.* 17:198–202.

National Health Service, NHS England (2019). Long Term Plan. Available at: http://www.longtermplan.nhs.uk (Accessed: 4 August 2022).

National Institute for Health and Care Excellence (NICE), (2022). Type 2 diabetes in adults: management. Available at: http://www.nice.org.uk/guidance/ng28/chapter/Context (Accessed: 4 August 2022)

PolonskyW.H., Anderson B.A., Lohrer P.A., WelchG.W., & JacobsonA.M. (1995).Assessment of diabetes-related emotional distress. Diabetes Care, 18, 754–760.

RubinR.R., &Peyrot M. (1992). Psychological problems and interventions in diabetes: A review of the literature. Diabetes Care, 15, 1640–1657.

Saudek C.D., RubinR.R., &Shump C.S. (1997). The Johns Hopkins guide to diabetes. Baltimore, MD: The Johns Hopkins University Press.

Welch G.W., Jacobson A.M., &Polonsky W.H. (1997). The problem areas in diabetes scale: An evaluation of its clinical utility. Diabetes Care, 20, 760–766.