



Full Length Review Article

DIABETES – PSYCHOLOGICAL DETERIORATION AND EFFECTS

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ABSTRACT

Diabetes is a chronic health problem with devastating, yet preventable consequences. It is characterized by high blood glucose levels resulting from defects in insulin production, insulin action, or both. Globally, rates of type 2 diabetes were 15.1 million in 2000; the number of people with diabetes worldwide is projected to increase to 36.6 million by 2030. This rate is expected to increase greatly over the next half century. Along with the increase in incidence of diabetes, both individual and societal expectations concerning the management of diabetes have also increased. Patients with diabetes often worry about lasting complications of the disease, how to manage the cost of the disease, and how it will affect their families or their jobs. Other research has focused on the cumulative effect of attitudes, preferences and conceptualizations in the form of identity, measuring the impact identification with the illness has on social relationships with others, including health care providers, and how this identity can influence certain behaviors.

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INTRODUCTION

Developed countries have made many advances to control infectious diseases thereby resulting in increased life expectancy of individuals, whereas non-infectious chronic diseases have not received the same attention. Diabetes is one of those chronic diseases which has now become a major global health problem. It is both progressive and life threatening with potentially devastating consequences for health (Suresh, 2006). The International Diabetes Federation (IDA) estimated at least 285 Million people worldwide are suffering from diabetes disease (about 6.4% of adults), and it is predicted to reach up to 435 million by 2030 (IDA, 2010). Asia is one of the regions that has experienced high prevalence of diabetes mellitus. For example, the Iranian Diabetes Society (IDS) estimated that at present there are 5 million diabetics in Iran, while less than 100,000 of them participated in Diabetes Patient Education (IDS, 2010). Unfortunately 50% of all the diabetic patients are unaware of their condition or do not have awareness about their disease, and they do not register themselves at the diabetes associations and clinics for patient education (IDA, 2010).

Diabetes -definitions and description

Diabetes is a chronic disease that occurs when the pancreas does not produce enough insulin, or when the body cannot effectively use the insulin it produces. Insulin is a hormone that regulates blood sugar. Hyperglycemia, or raised blood sugar, is a common effect of uncontrolled diabetes and over time leads to serious damage to many of the body's systems, especially the nerves and blood vessels. After a meal, the portion of the food a person eats is broken down into sugar (glucose). The sugar then passes into the bloodstream and to the body's cells via a hormone (called insulin) that is produced by the pancreas. Normally, the pancreas produces the right amount of insulin to accommodate the quantity of sugar; however, when the person has diabetes, either the pancreas produces little or no insulin or the cells do not respond normally to the insulin. Sugar builds up in the blood, overflows into the urine, and the passes from the body unused (WHO, 2010).

Diabetes Facts

- Diabetes deaths are likely to increase by more than 50% in the next 10 years without urgent action.

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- In 2004, an estimated 3.4 million people died from consequences of high blood sugar.
- Most people with diabetes in low and middle income countries are middle-aged (45-64), not elderly (65+).
- Diabetes causes about 5% of all deaths globally each year.
- Almost half of diabetes deaths occur in people under the age of 70 years; 55% of diabetes deaths are in women.
- Healthy diet, regular physical activity, maintaining a normal body weight and avoiding tobacco use can prevent or delay the onset of diabetes (WHO, 2010).

Epidemiology and prevalence

The International Diabetes Federation (IDA) estimated at least 285 million people worldwide are suffering from diabetes disease (about 6.4% of adults), with 46% of all those affected in the 40-59 age group; it is however predicted that it may reach up to 435 million by 2025 (IDA, 2010). Asia is a one of the regions that has high prevalence of diabetes mellitus. Indian Diabetes Association estimated that there are approximately 31.1million diabetics in India. (IDA, 2010) and it will be around 100 million mark in 2030.

Diabetic related psychological disorders

The physical impact of diabetes is well reported but the emotional impact is still not always recognized. Diabetes can have an emotional impact, especially around diagnosis, starting insulin, and on developing complications. Many people find their own personal way to deal with these feelings, but for some they continue to struggle to come to terms with how their diabetes making them anxious and leads to stressful situation. The unawareness about the disease may also leads to the unwanted anxiety and stress. For some people with diabetes these feelings can develop into depression. Diabetes can have a significant impact on both physical and psychological functioning which can impair people's quality of life. In terms of psychological functioning, the demands of diabetes care can have potent impact on mood, both short – term and long-term. Adjustment to diabetes is often accompanied by a variety of negative emotional responses, including anger, guilt, frustration, denial, and loneliness. Frequent hypoglycemic episodes can be exhausting, discouraging and frightening. In addition, chronically elevated blood glucose levels may lead to persistent fatigue, which can exacerbate depressed mood. Psychological stress can also affect diabetes control and the release of counter regulatory hormones often results in elevated glucose levels. In addition stress can disrupt diabetes control indirectly through its impact on diet, exercise and other self-care behaviors. Both long-term and short-term complications can negatively affect physical functioning. The development of complications can result in sickness absence, disability, premature retirement or premature mortality with loss in earnings and negative impact on quality of life of the person with diabetes and his or her family. The ongoing threat of complications can also be worrying and depressing. When the patients suffer vision loss, kidney damage, significant heart diseases, sexual relationship problems through erectile dysfunction, peripheral neuropathy resulting in chronic pain, amputation, and /or difficulty in

walking, or any of host of automatic neuropathy problems, there is likely to be a significant drop in perceived quality of life. The patient may become unable or less able to work, to complete household tasks, or to enjoy leisure activities or normal family life. The patient's ability to function independently may also be impaired. Psychologists can play an important role in helping people live well with diabetes. Diabetes presents a significant challenge and stress for diabetics and those around them. Psychologists are well trained in behavior change interventions. They understand the problems in diabetes self-care, and can help the individual to overcome the difficulties and to change their behavior. In addition to the behavioral demands of diabetes there are emotional and social problems that can arise. Diabetes is often perceived as a burden. It can be hard to accept the disease, and feelings of depression (feeling overwhelmed), anxiety (fear of complications or hypoglycemia) and frustration (with the demands of self-care, or the medical system) are common. Young people, especially young women with Type 1 diabetes, are at risk for developing eating disorders (weight loss through insulin omission). Social problems can result from diabetes as well. Many individuals who do not have diabetes find it difficult to understand the needs of someone with diabetes. Even if they mean well, often those without diabetes act in ways that are not supportive. For example, friends can encourage a person with diabetes to eat something they shouldn't because "once can't hurt". Psychologists work with individuals with diabetes in a number of ways. They can help the newly diagnosed individual to understand the impact of diagnosis and their role in managing it. They can help them learn the daily behaviors needed for successful maintenance. They are trained to recognize and treat psychological distress, including depression and anxiety that can develop when living with an unpredictable disease.

Anxiety

Anxiety is an unpleasant emotional state consisting of psycho physiological responses to anticipation of unreal or imagined danger, ostensibly resulting from unrecognized intrapsychic conflict. Physiological concomitants include increased heart rate, altered respiration rate, sweating, trembling, weakness and fatigue; psychological concomitants include feelings of impending danger, apprehension and tension (Corsini, 1999).

Diabetes related anxiety

Patients with diabetes often worry about lasting complications of the disease, how to manage the cost of the disease, and how it will affect their families or their jobs. A meta-analysis of anxiety prevalence among individuals with diabetes, with combined sample of 2,584 participants with diabetes and 1492 non-diabetes, indicated that 14 % of those with diabetes experienced generalized anxiety disorder, and that 40% experienced elevated anxiety symptoms (Grigsby *et al.*, 2002). In addition, 13% of youth diagnosed with diabetes developed an anxiety disorder within ten years after the diabetes diagnosis (kovacs *et al.*, 1997). Although anxiety symptoms were higher among women than men, a meta-analysis of 11 studies which assessed the relationship between anxiety and control of blood sugar found that anxiety rates for those with Type 1 and Type 2 diabetes were similar.

However, when only studies that utilized diagnostic interviews to assess anxiety were included, anxiety was significantly related to glycemic control with a significant effect size (Anderson *et al.*, 2002). Some individuals have exhibited diabetes-specific anxiety, such as fear of hypoglycemia (FH). Studies have found relationships between FH and poor glycemic control, (Cox *et al.*, 1987), higher trait anxiety and post hypoglycemic experiences, difficulty distinguishing between anxiety and hypoglycemia (Polonsky *et al.*, 1992), as well as higher perceived Stress, frequency of past hypoglycemic episodes, and greater daily variations in blood sugar (Irvin *et al.*, 1992). Some individuals attempt to avoid this fear hypoglycemia, compromising their glycemic control by administering lower insulin dosage/maintaining higher blood sugar levels (Surwit *et al.*, 1982), or over eating in response to early signs of hypoglycemia if individuals engage in this avoidance behaviors they may increase risk for the long-term medical complications associated with hyperglycemia (Cox *et al.*, 1987). Early and intensive treatment can influence patients' psychological outcomes, thereby leading to relatively more anxiety and less self-efficacy in the 1st year after diagnosis (Thoolen *et al.*, 2006). Because some individuals 1) report ongoing intrusive worry about hypoglycemia; 2) become anxious in response to this intrusive ideation, even when blood sugar is not low; and 3) react with avoidance behaviors that compromise their diabetes regimen and pose serious long-term health risks, the authors evaluated the full post traumatic stress symptomatology among individuals using thigh control regimens. About 25% of patients reported symptoms consistent with current post traumatic stress disorder (PTSD) about hypoglycemia (Myerset *et al.*, 2007).

Diabetes related depression

The co-morbidity of diabetes and depression has received enough empirical investigation to generate several meta analytic studies to summarize the findings, first a meta analysis of nine studies published prior to January, 2005 that assessed the relationship of depression to the subsequent development of Type 2 diabetes suggests that depressed adults are 37% more likely than those without depression to develop Type 2 diabetes (Knol *et al.*, 2006). In addition, depression appears more common among individuals who have diabetes than those without diabetes. Although some studies have found depression to be six times higher among those with diabetes (Lustman *et al.*, 1986), a meta- analysis of 42 studies indicates an odds ratio of 2:1, that is, depression is twice the prevalence among those with diabetes compared to those without diabetes. In another study, depression rates for those with diabetes were 28% among women and 18% among men, with rates as high as 32% in sample seeking clinical services (Anderson *et al.*, 2001). Major depression in another sample was present in at least 15% of patients with diabetes (Garvard *et al.*, 1993). Depression is associated with poorer glycemic control, health complications, decreased quality of life and increased healthcare costs (Egede *et al.*, 2002). Although women showed higher absolute rates of depression than men, the odds ratio was consistent for sexes as well as for Type 1 and Type 2 diabetes, women had twice the rate of depression than that of men. A review of depression prevalence among individuals with Type I diabetes that included five studies

since the Anderson and colleagues meta-analysis (2001) indicated 125 of persons with diabetes has co-morbid depression, compared to a 3.2 % rate of depression for those without diabetes (Barnard *et al.*, 2006).

Perceived stress

The perceived stress is the degree to which situations in one's life are appraised as stressful. It showed that people to tap how unpredictable, uncontrollable, and overloaded respondents find their lives (Cohen, Kamarck, and Mermelstein, 1983).

Diabetes related to stress

It is hard to dispute that most of people live life at breakneck speed. It is the nature of a fast-paced society, where numerous family, social, and work obligations can easily overpower precious time and resources. But for people with diabetes, both physical and emotional stress can take a greater toll on health. Patients with diabetes commonly experience long-term stress or depression. It often is a direct result of the disease itself due to the emotional ups and downs patients experience during chronic management. The disease itself can be overwhelming and often leaves a patient wondering, "Why me?" Identifying these patients and helping them with tips to manage stress effectively can have a positive impact, not only on their emotional well-being, but on their long-term clinical outcomes as well. Sources of stress can be physical or mental. Examples of physical stresses include infections, trauma, injuries, or sickness. Mental stresses include relationship difficulties/ financial concerns, and pressure from a stressful job. Physiologically the body responds to stressors by secreting the counter-regulatory hormones such as epinephrine, cortisol, and glucagon. These hormones, although helpful to boost energy when needed, can work counterproductively to keep the body at a constant state of arousal. Think of the fight-or-flight response. We cannot fight danger when our blood sugar is low, so it rises to help meet the challenge. Both physical and emotional stress can prompt an increase in these hormones, resulting in an increase in blood sugars (Suresh, 2006). The stressful life events appropriate for middle-age and elderly adults showed that somatic illness of self has great importance for people. The Social Readjustment Rating Scale (SRRS) developed by Holmes and Rahe (1967) showed that the sixth item of stressful life events for people is personal injury or illness. Stress is one of the risk factors among people with Diabetes Type 2 (IDA, 2010).

Amputation

Diabetes is the most common cause of amputation that is not the result of an accident. People with diabetes are 15 to 40 times more likely to require lower-limb amputation compared to the general population. This also results psychological impacts on the patients.

Management of psychological distress of diabetic patients

Being diagnosed and living with diabetes can affect people in very different ways. While some may find coping with diabetes has very little impact on day-to-day life, others may find that it has turned their lives upside down. Finding diabetes

difficult to cope with does not mean that you are doing something wrong. Many people with diabetes who we speak to feel that at some point in their lives, their diabetes causes them to feel like they are not coping. Many feel alone. The physical impact of diabetes is well reported but the emotional impact is still not always recognized. Diabetes can have an emotional impact, especially around diagnosis, starting insulin, and on developing complications. Many people find their own personal way to deal with these feelings, but for some they continue to struggle to come to terms with how their diabetes making them anxious and leads to stressful situation. The unawareness about the disease may also leads to the unwanted anxiety and stress. For some people with diabetes these feelings can develop into depression. This study will help to clarify the relation between types of anxiety among diabetic patients. The levels of anxiety can be elaborated through this study and remedial measures can be formulated. Psychologists can be helpful in assisting the individual to develop and maintain the motivation needed to follow the daily routine of self-care. As well, family therapy and strategies to deal with social pressures are often beneficial to those with diabetes and their loved ones. Many people think that diabetes treatment is very simple, once the right amount of medication or insulin has been determined. Unfortunately, management is much more complicated. Psychological wellbeing is an important goal of medical care, and psychosocial factors are relevant to nearly all aspects of diabetes management.

They can help the newly diagnosed individual to understand the impact of diagnosis, and their role in managing it. They are trained to recognize and treat psychological distress, including depression and anxiety that can develop when living with an unpredictable disease. Psychologists can be helpful in assisting the individual to develop and maintain the motivation needed to follow the daily routine of self-care. As well, family therapy and strategies to deal with social pressures are often beneficial to those with diabetes and their loved ones (Suresh, 2006).

REFERENCES

- Corsini, 1999. Dictionary of psychology, Talor and Francis
Grigsby *et al.*, 2002 Psychological Co-morbidities of Physical Illness: A Behavioral Medicine, Springer
Kovacs *et al.*, 1997. Handbook of Chronic Depression: Diagnosis and Therapeutic Management
Polonsky *et al.*, 1992. Stress and Emotion - Volume 15 - Page 39, Charles Donald Spielberger
Suresh, 2006. Differential effect of saturated, monounsaturated, and polyunsaturated fatty acids on alloxan-induced diabetes mellitus Y. Suresh, Undurti N. Das UND Life Sciences
Thoolen *et al.*, 2006. Effects of Social Support on Self-care Adherence Among Diabetic Patients
