EFFICACY OF PSYCHO-NUTRITIONAL INTERVENTION PACKAGE IN THE CURE PROCESS OF TYPE 2 DIABETES MELLITUS

Thesis
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INTRODUCTION

The interaction of mind and body has been a concern for philosophers and scientist for centuries. Different models of relationships have predominated at different times in history, but current emphasis is the unquestionable unity of the two which has originated the field of Psychology. Health psychology is the field within psychology develops to understand psychological influence on how people stay healthy, why they become ill and how the cure process takes place. It focuses on health promotion and maintenance, prevention and treatment of illness; the etiology and correlation of health, illness and dysfunction and the improvement of health care system and the formulation of health policy (Taylor, S.E., 2006)

The present study deals with the efficacy of psychonutritional cure methods in the cure process of Type 2 diabetes mellitus, a psychosomatic disease. The bio-psycho-social model in health psychology research is followed in this study. The bio-psycho-social model’s fundamental assumption is that any health or illness outcome is the consequence of
the interplay of biological, psychological and social factors. The biomedical model is reductionistic model, that it reduces illness to low-level processes such as disordered cells and chemical imbalance rather than recognizing the role of more general, social and psychological processes. It regards mind and body are separate entities. Moreover the biomedical model emphasizes illness over health that is, focusing more attention on aberrations that leads to illness rather than the conditions that might promote health (Angel.G.L.1977)

**DIABETES**

Diabetes is the third most common chronic illness in most of the developing and developed nations and one of the leading causes of death. An estimated 11 million people in the United States were diagnosed with diabetes in the year 2000 (Boyle *et al.*, 2000), and approximately 90% of those individuals were diagnosed with Type 2 diabetes. The number of individuals diagnosed with Type 2 diabetes has been rising at an alarming rate over the past several decades (Harris, 1998). It has been estimated that this figure will increase by 165% to 29 million by the year 2050, reflecting a 7.2% prevalence rate. Such an increase is hypothesized to be the
result of changes in demographic composition of the population, population growth, and increasing prevalence rates (Boyle et al., 2001). In modern medical practice a clear depiction of etiology and cure are not given. Many method of diabetes management are elaborated. At the same time holistic therapists claim that diabetes is a curable disease. In the context of its dubious etiology and inconclusive cure method the present study aims at an elaborate investigation on the efficacy of certain cure methods.

Personal and public health consequences associated with Type 2 diabetes are profound. For example, individuals with diabetes experience a greater number of health complication (Harris, 1998) and are at higher risk for depression than are their medically well counterparts (Anderson, Freeland, Clouse, & Lustman, 2001). On a more global scale, the economic impact of diabetes is staggering; in 1997, the direct and indirect costs associated with diabetes in the United States were an estimated $98 billion (Ray, Thamer, Gardner, & Chan, 1998). Thus, the increasing prevalence of diabetes in the United States represents a
critical public health problem with respect to health care use and resources.

Type 2 diabetes is manageable, and many of the serious medical complications that are associated with the illness are preventable through adequate control of blood glucose levels. Therefore, the primary treatment goal for individuals with Type 2 diabetes is to maintain blood glucose levels within a normal range. For many, maintaining this complex treatment regimen is difficult, and assistance with disease management is often warranted. As such, researches and the medical community have recognized the critical role of behavioral sciences in optimizing regimen adherence and health outcomes among patients with Type 2 diabetes (Glasgow et al., 1999; Wysocki & Buckloh, 2002).

**Structure and Function of Pancreas**

Pancreas is an important structure found in the abdomen, which plays a major role in the causation of diabetes mellitus. Pancreas is a soft flat gland, which is 15-20 cm long, 3-5 cm broad, 2-4 cm thick and 80-90 gm in weight. It is situated in the posterior part of the abdominal cavity just behind the stomach. Pancreas consist of three parts the head,
the body and tail. The head is enclosed in a ‘C’ shaped concave structure, the duodenum that lies between the lower end of stomach and the upper end of the small intestine. The tail end in a firm organ, the spleen that is located in the left upper portion of the abdominal cavity, the portion between the head and the tail is the body. Functionally pancreas consists of two parts:

**The Digestive Part**

About 99% of the pancreas consists of digestive part. It comprises a large number of cells, which produce the digestive enzymes, which are important for the digestion of proteins, carbohydrates and fats in the food.

**The Hormonal Part**

About 1.2% of the weight of pancreas constitutes the hormonal part. A hormone is a chemical substance, which is produced by an organ or a gland and sends to another part of body through the blood where it increases the functional activity of that part. The hormonal part of the pancreas consist of large clusters of cells called the islets of Langerhans, named after the discoverer Paul Langerhans,
who discovered them in 1869. There are about 2 million islets in the pancreas. The islets consist of four types of cells:

- A or alpha cells produce the hormone glucagons
- B or beta cells produce the hormone insulin
- D or delta cells produce the hormone stomatostatin
- F cells produce pancreatic polypeptide.