# INTRODUCTION

The term diabetes mellitus (DM) describes a metabolic disorder with heterogeneous etiologies which is characterized by chronic hyperglycemia and disturbances of carbohydrate, fat and protein metabolism resulting from defects in insulin secretion, insulin action, or both ***(World Health Organization, 2011).*** It is a life long and silent killer disease marked by elevated levels of sugar in the blood that affects millions of peoples in the world ***(Samreen, 2009).***

There are main four types of diabetes: type 1diabetes (insulin dependent diabetes mellitus→ IDDM), type 2 diabetes (non insulin dependent diabetes mellitus→ NIDDM), gestational diabetes and other specific types of diabetes mellitus. ***(Santhosh, Vasanth and Ramanth, 2011).*** Diabetes mellitus can caused as a result the body is not able to correctly process glucose for cell energy due to either an insufficient amount of the insulin hormone or a physical resistance to the insulin that the body does produce it. ***(Donovan, Byrne and Sahm, 2011)***

Egypt has figured the highest incidence of diabetes cases as up to 11 percent of its population has been diagnosed with the disease. The number of diabetes cases is set to double by 2025 ***(Ashraf, 2011).*** Due to an aging population, growth of population size, urbanization and high prevalence of obesity and sedentary lifestyle. Diabetes leads to both premature death and complications such as blindness, amputations, renal disease and cardiovascular diseases***. (Ping, Xinzhi, Jonathan, Richard and Gregory, 2010).*** As this rises in prevalence of diabetes mellitus are likely to bring a concomitant increase in its complications among diabetic patients. One

important complication of DM are foot problems, these complications constitute an increasing public health problem ***(Desalu, 2011).***

Diabetic Foot problems are represented in foot ulceration and infection. The development of diabetic foot typically results from peripheral neuropathy complicated by deformity, callus, and trauma, vascular insufficiency, infection and failure to implement effective treatment. ***(Herman, Funnell and Nelson, 2010).*** Diabetic foot is a major medical, social, economic problem and a leading cause of morbidity, disability and mortality, especially in the developing countries. Fifteen percent of all diabetics develop foot ulcers. More than 85% of lower extremity amputations in patients with diabetes occur in people who have had an antecedent foot ulcer. Diabetic foot ulcers (DFU) have a negative impact on patients' quality of life (QoL) ***(Zubair, Malik1 and Ahmad 2010).***

The major causes of diabetic foot are peripheral neuropathy (PN) that eventually causes loss of protective sensation, foot deformity, dry skin, crackling or fissure. Moreover, some of the patients' daily activities, such as walking bare foot or improper trimming nails are potential causes of foot ulcer. As well as peripheral arterial disease (PAD) that easily results in foot ulceration ***(Kurniawan, and Petipichetchian, 2011).***

Risk factors associated with diabetic foot includes loss of protective sensation due to neuropathy, peripheral arterial disease (PAD) and Trauma resulting from poor footwear, walking barefoot and objects inside the shoes, history of previous foot ulceration and amputation, Foot deformities, Poor glycemic control as well as low Socioeconomic factors and Cigarette smoking ***(Lavery, 2011).***

The diagnosis of a diabetic foot requires careful examination of the patient's feet. Routine foot assessments and patient education can prevent up to 85 % of diabetes related amputations ***(Sanchez, 2009).*** As well as Imaging Studies should be done for diabetic foot patients for diagnosis as foot X-ray, Computed tomography (CT) scan and Magnetic resonance imaging (MRI) ***(Capes and Sherifali, 2010).***

Management of diabetic foot should be performed by multi-disciplinary approach indicating that the close collaboration of a physician, nurses, dietitians and podiatrist in providing the required care and an acceptable follow up that help in improving patients' health status ***(Pajouhi, 2010).*** Nurses play an important role in managing diabetic foot as they constitute the largest group of health care professionals who have a lengthy contact with diabetic patients ***(Odili and Eke, 2010)***

Although much effort has been expanded in developing the competence of nurses in diabetes care, little is known about their level of foot care knowledge ***(Shiu and Wong, 2011).*** Therefore this study will be carried out in order to assess degree of nurses' knowledge and their practice regarding to care for diabetic foot patients to identify positive and weakness points in their performance.

## Significance of the Study

It has been observed that Diabetic foot is one of the most common and feared complications of diabetes which result in foot ulcers and amputations that are considered major causes of morbidity, disability and mortality, as well as emotional and physical costs. In Egypt the results of diabetic foot complications has been founded to be high on which foot ulcer represent 6.8%, fungus infection represent 22%, amputation represent 3%, and deformity represent 1% among 2000 diabetic patients. ***(Gawish, 2008).***

Diabetic foot disease requires more qualified nurses in performing (knowledge and practice) to provide good care for diabetic foot patients, to meeting patients need and prevent complications. Knowledge about diabetic foot disease can help nurses to assess patients risk for diabetic foot complications, motivate them to seek proper treatment and care, and inspire them to take charge of their disease for their life time ***(Maina, Ndegwa, Njenga, and Muchemi, 2011).*** Accordingly, it is important to assess the performance of nurses whom caring for diabetic foot patients in order to identify whether effective and appropriate nursing care has been provided. As well as identify weakness point in nurses' knowledge and their practice regarding diabetic foot.