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عنوان البحث :

**Self-management assessment for diabetic foot patients in Wasit city, Iraq**

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(هُوَ الَّذِي بَعَثَ فِي الْأُمِّيِّينَ رَسُولًا مِّنْهُمْ يَتْلُو عَلَيْهِمْ آيَاتِهِ وَيُزَكِّيهِمْ وَيُعَلِّمُهُمُ  
الْكِتَابَ وَالْحِكْمَةَ وَإِن كَانُوا مِن قَبْلُ لَفِي ضَلَالٍ مُّبِينٍ)

سورة الجمعة- الآية 2.

## الاهداء

إلى صاحب السيرة العطرة، والفكر المُستنير؛

فلقد كان له الفضل الأوّل في بلوغي التعليم العالي

(والدي الحبيب).

إلى من وضعتني على طريق الحياة، وجعلتني رابط الجأش،

وراعتني حتى صرت كبيرًا

(أمي الغالية).

إلى إخوتي ؛ من كان لهم بالغ الأثر في كثير من العقبات والصعاب.

إلى جميع أساتذتي الكرام ؛

ممن لم يتوانوا في مد يد العون لي وبالخصوص الاستاذ ( هاني البدري )

أهدي إليكم بحثي .....

## شكر وتقدير

أول مشكور هو الله عز وجل، ثم والداي على كل مجهوداتهم منذ ولادتي إلى هذه اللحظات، أنتم كل شيء أحبكم في الله أشد الحب.

يسرني أن أوجه شكري لكل من نصحني أو أرشدني أو وجهني أو ساهم معي في إعداد هذا البحث بإيصالي للمراجع والمصادر المطلوبة في أي مرحلة من مراحلها، وأشكر على وجه الخصوص استاذي الفاضل (هاني البديري) على مساندي وإرشادي بالنصح والتصحيح حول موضوع البحث .

## TABLE OF CONTENTS

	<u>Page</u>
TABLE OF CONTENTS.....	5
<b>1. INTRODUCTION.....</b>	<b>6</b>
<b>.1.1 Importance of the study.....</b>	<b>7</b>
<b>1.2. Problem statement .....</b>	<b>7</b>
<b>1.3. Objectives.....</b>	<b>8</b>
<b>2. GENERAL INFORMATION .....</b>	<b>9</b>
<b>2.1. Diabetes Prevalence.....</b>	<b>9</b>
<b>2.2. Pathophysiology.....</b>	<b>10</b>
<b>2.3. Advice for Caring Foot for Diabetics Patients.....</b>	<b>10</b>
<b>2.4. Diabetic foot .....</b>	<b>11</b>
<b>3. METHODOLOGY.....</b>	<b>11</b>
<b>3.1. Study design: A descriptive cross-sectional study. ....</b>	<b>11</b>
<b>3.2. Setting and sample of the study.....</b>	<b>11</b>
<b>3.2.1 Place and Sample .....</b>	<b>11</b>

## 1. INTRODUCTION

Diabetes mellitus foot ulcers are a serious consequence that have significant morbidity, mortality, and resource usage rates. The estimated annual incidence is 2%, while the projected lifetime incidence ranges from 19% to 34%.<sup>4</sup> Due to their complex etiology, these foot ulcers are difficult to treat and have significant negative effects on patients, healthcare systems, and society.<sup>5</sup> Recurrence rates of 40% in the first year and 65% in the first three years after ulcer healing have been observed, indicating that even when an ulcer is properly treated, the chance of recurrence is substantial. (van Netten et al., 2020).

Over two-thirds of those with diabetes in low- and middle-income nations do not have a diagnosis, and the prevalence of the disease is rising. Diabetes complications hence are typically present at the time of diagnosis. Among diabetics, foot ulcers are a primary cause of disability and mortality (Bossman et al., 2021) .

Diabetes mellitus (DM) is a chronic disorder defined by hyperglycemia that is brought either by abnormal insulin synthesis or insulin resistance (impaired use). Diabetes care may result in an 8% rise in the financial burden (727 million in 2015 and 850 million in 2017). (International Diabetes Federation, 2017). Chronic complications that can occur in people with diabetes include nephropathy, neuropathy, diabetic retinopathy, angiopathy, and foot problems. Hyperglycemia can also cause complications for patients (Frisca, 2021).

### **1.1.Importance of the study**

Over two-thirds of those with diabetes in low- and middle-income nations do not have a diagnosis, and the prevalence of the disease is rising. Diabetes complications hence are typically present at the time of diagnosis. Among diabetics, foot ulcers are a primary cause of disability and mortality (Bossman et al., 2021a).

One of the significant effects of diabetes is diabetic foot, which develops as a result of damaging factors in several foot anatomical areas. To reduce or eliminate foot ulcers, management and monitoring of these characteristics are essential (Moulaei et al., 2021).

Diabetes-related foot causes a great deal of pain and expense for the patient, as well as a great deal of strain on the patient's family, healthcare professionals, and society at large. Patients with diabetic foot ulcers frequently need to have their lower limbs amputated. It is advised that preventative measures can cut the risk of diabetic foot problems and amputations by up to 85%. These preventive measures include training for patients and staff, multidisciplinary care, and continuous risk monitoring (Abdelhamid et al., 2019).

### **1.2.Problem statement**

To avoid diabetes-related morbidity and mortality, diabetic individuals must carry out their daily self-management actions following their health care provider's instructions. Patients' ability to effectively manage their diabetes is thought to be enhanced by enhancing their knowledge of the disease and improving their prevention through self-management in diabetes treatment. On the other hand, patients use self-care management practices based on their health beliefs about their illness.

### **1.3.Objectives**

- Evaluation of the relationship between demographic data of diabetic foot patients and self-management in Wasit city, Iraq.



## **2. GENERAL INFORMATION**

Diabetes is a silent disease, and many diabetics may not realize they have it until serious consequences have already occurred. Knowing about diabetes could aid in an early diagnosis and reduce the likelihood of complications. Therefore, healthcare providers and public policy makers are working very hard to educate them about diabetes (Sitaula et al., 2022).

Diabetes mellitus (DM) is a serious non-communicable disease that is threatening both rich and less comfortable societies globally. Diabetes already affects more than 170 million people globally, and if the current trend is allowed to continue, this number is expected to more than double by the year 2030.

(Obirikorang et al., 2016).

The disease's micro- and macrovascular consequences, which raise morbidity and death, are mostly to responsibility for its true burden. Keeping adequate glycemic control can lower the risk of these problems. Medication non-adherence lowers its effectiveness, which affects glycemic management. Patients with type 2 diabetes mellitus (T2DM) have an elevated risk of stroke, and regardless of age or treatment, the majority of them had poor glycemic control. Self-care is a crucial part of the diabetes treatment process. Diabetes self-care, which accounts for 98% of self-care activities, is time-consuming and complex. Other family members might be affected by its use (Jannoo & Mamode Khan, 2019).

### **2.1. Diabetes Prevalence**

The prevalence of diabetes (DM) has dramatically increased over the past few decades, mostly as a result of the persistent rise in the incidence of type 2 DM. In 2014, there were >422 million adults suffering from DM worldwide, and it is anticipated that this number will continue to increase (Lovic et al., 2020).

in various stages (Ramachandran et al., 2022).

## **2.2.Pathophysiology**

Diabetes mellitus is a chronic metabolic disorder characterized by elevated blood glucose levels that, over time, harm the heart, blood vessels, eyes, kidneys, and nerves, according to the World Health Organization (WHO). More than 90% of cases of diabetes mellitus are due to T2DM, which is characterized by tissue insulin resistance (IR), insufficient compensatory insulin secretory response, and insufficient insulin production by pancreatic islet cells. Hyperglycemia results from the inability of insulin secretion to maintain normal glucose levels as the condition develops. The key traits of T2DM patients are obesity or having a higher body fat percentage, especially in the abdominal region. In this scenario, adipose tissue encourages insulin resistance through a number of inflammatory pathways (Galicia-Garcia et al., 2020).

## **2.3.Advice for Caring Foot for Diabetics Patients**

Watch out for your feet.

In order to prevent major foot issues when you have diabetes, taking care of your feet is crucial. Maintaining your feet involves performing the following:

Every day, properly wash and dry your feet. Don't forget to dry in between your toes.

3. Avoid moisturizing in between your toes; instead, moisturize your feet.
- 4.Keep your nails short and file down any sharp edges with an emery board.
5. On a daily basis, examine your feet for sores, wounds, blisters, corns, and redness.
6. If you notice any of these, inform your doctor.
7. Put on socks that wick moisture.
8. Scan the area for sharp items before putting on your shoes (i.e. small rocks)
9. Wear comfortable footwear that doesn't rub your feet. (American Diabetes Association, 2023).

## **2.4.Diabetic foot**

Diabetes-related neuropathy is a form of nerve injury that can be brought on by persistently high blood sugar. Although diabetes-related neuropathy can affect any part of the body, it most frequently affects the legs and feet. You could lose feeling in your feet as a result of the disorder. You might not detect a blister, cut, or pain if your feet are traumatized. For instance, you might not even notice when your foot is being sliced by a pebble in your sock. Unnoticed and untreated wounds have the potential to get infectious (Cleveland Clinic, 2023).

## **3. METHODOLOGY**

**3.1.Study design:** A descriptive cross-sectional study.

### **3.2.Setting and sample of the study**

#### **3.2.1 Place and Sample**

The research data were collected from Wasit city diabetics and **endocrine center, Iraq** , Wasit city, Iraq. The study sample is 300 patients. The sample was chosen by using a purposive sample.

Inclusion criteria of sample

- DM patients of either sex who give consent to participate in the study.
- DM patients between ages 35 and 60 years old.
- Participants who don't have cognitive functioning or and able to communicate, read and understand Arabic language.
- Not pregnant or lactating mothers.
- Patients providing complete information during completion of the questionnaire

#### **3.3.Study instrument:**

- **Socio-demographic form**

The first part were included 8 questions to determine (age, gender, family size, marital status, work experience, educational status, income satisfaction, presence of a risk factor for a foot ulcer) (Appendix 1).

- **The second part, the medical history of patients**

Consists of 7 questions (type of DM, duration of DM, comorbidity; type of comorbidity, diabetic complications, type of complication, history of foot problems)

- **The third part, diabetic foot self-care questionnaire in Arabic patients (DFSQ-AR)**

Navarro-Flores et al. A questionnaire prepared by and adapted to Arabic was used. [17]. A 16-question self-care assessment instrument for evaluating diabetic foot health issues is called the Diabetic Foot Self-Care Questionnaire. It has subdimensions that measure knowledge of foot hygiene (items 1, 2, 3, 4, 5, 6, 7), appropriate footwear use (items 8, 9, 10, 11), hosiery knowledge, and self-care for foot care (items 12, 13, 14, 15, 16) The range of options is Never = 1 Rarely = 2, occasionally = 4 Never

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