**A blue shield with a castle and a book

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**Nursing Department – Morning**

**Grade ‘‘2’’**

**Graduation Project**

***Assess Treatment regimen adherence among type 2 DM patients***

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**COMMITTEE CERTIFICATE**

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**Abstract**

Medication adherence is a significant universal factor impacting patient health outcomes, especially in chronic conditions like diabetes. Poor adherence to antidiabetes medicine can lead to therapeutic failure, resulting in diabetes-related problems such as retinopathy, neuropathy, and nephropathy, as well as a lower quality of life and higher healthcare expenditures. To avoid them, potential indicators of medication nonadherence should be identified and addressed effectively. The goal of this study was to examine medication adherence among type 2 diabetes patients. Since diabetes has serious complications that might result in life-long handicaps or even death, it is vital to ensure that people have reasonable control of the disease, which is eventually by good adherence to drugs, diet, and a good lifestyle. People non-adherence to any part of the therapy program for diabetes might result in worsening the condition. This study aimed to evaluate the compliance of people with diabetes to drug, diet, and lifestyle changes in Erbil city, Iraq.

This study performed from December 2024 to April 2024. Total 50 patients from different Erbil hospitals chosen to participate in the study after taking ethical considerations. A self-designed questionnaire was prepared to assess biographic data of participants as well as practice of patient regarding to Assess treatment regimen adherance among type 2 diabetes mellitus patients.

**Conclusion** The study found that patients are somewhat adherent to treatment, due to the information provided by doctors and nurses, but there are still some patients who do not take medication carefully.

**Result** The average level of adherence was 61.11%, which means that more than half of the patients were compliant but we recommend that patients be more aware and receive more instructions to adhere well to medication use.

Chapter One

**Introduction**

Diabetes is a chronic metabolic condition characterized by high blood glucose (or blood sugar) levels, which cause long-term damage to the heart, blood vessels, eyes, kidneys, and nerves. The most prevalent is type 2 diabetes, which mainly affects adults and arises when the body develops insulin resistance or fails to produce enough insulin. Type 2 diabetes has increased substantially during the last three decades in countries of all income levels. Type 1 diabetes, also known as juvenile diabetes or insulin-dependent diabetes, is a chronic illness in which the pancreas generates little or no insulin on its own. People with diabetes require cheap care, including insulin, in order to survive.

Type 2 diabetes can occur at any age, including in childhood. However, type 2 diabetes is most common among middle-aged and elderly adults. You are more likely to acquire type 2 diabetes if you are 45 or older, have a family history of diabetes, are overweight (Diabetes is more frequent among those who are African American, Hispanic/Latino, American Indian, Asian American, or Pacific Islander. One in ten Americans, or around 38 million, have diabetes, and 90–95% of those cases are type 2 diabetes. People over 45 are most likely to get type 2 diabetes, but adolescents, teens, and young adults are increasingly becoming more and more susceptible to the disease [4]. Since there are few studies on the subject and patient knowledge about the illness process, therapy, and medication side effects may be very important in determining the prognosis of DM condition, we decided to conduct this study to find out how much information local DM patients know. Forty individuals were given questionnaires to complete for the study. Those with limited understanding were verbally informed using the questions. The majority of the research sample had strong general knowledge and information, indicating that their knowledge was good. According to [3] Type 2 diabetes mellitus (T2DM) is an expanding global health problem, closely linked to the epidemic of obesity. Medical treatment for diabetics cost $327 billion in 2017, a 26% increase from 2012. Many of these medical expenses are for hospitalization and inpatient treatment, which represent for 30% of total medical costs for diabetics. People with diabetes may also avoid self-management duties for a variety of reasons, including inadequate health literacy, a lack of diabetes understanding, and distrust between patients and healthcare providers.

The World Health Organization stated that, in developed countries, adherence to medication in chronic conditions is only around 50%. Decreased levels of adherence are normally seen in patients with chronic conditions compared with those with acute conditions, and this leads to poorer health outcomes and also has a substantial impact on healthcare costs [9].

**Objectives of the study**

* To assess medication adherence and self-care behaviors in type 2 diabetes patients.
* To measure demographic data among participants which may affect patient’s adherence.

**Review of literature**

**History**

The disease is predicted to be prevalent in over 300 million people by the year 2030. African Americans (AA) have the highest prevalence rates of type 2 diabetes mellitus (T2DM) in the United States. Lifestyle modification and awareness of risk factors, including family history, are important aspects for prevention of developing T2DM. The purpose of this study was to understand if a family history of T2DM played an influential role in individuals making positive health behavior changes for T2DM prevention. The phenomenological study was grounded in the health belief model and also identified barriers associated with inactivity towards positive health behavior changes. Participants selected for this study were at least 18 years of age, self-identified as AA, self-reported a family history of T2DM, and were not diagnosed with the disease themselves. Transcriptions of twenty face-to-face interviews were analyzed via qualitative research software NVivo Version 12 for Mac. Participants demonstrated a strong awareness of T2DM with an accurate definition of T2DM and explanation of signs, symptoms, and prevention. [1]

**Pathophysiology**

Type 2 Diabetes Mellitus (T2DM) is a common metabolic condition caused by inadequate insulin production by pancreatic β-cells and insulin-sensitive tissues' inability to respond adequately. Because insulin release and activity are critical processes for glucose homeostasis, the molecular mechanisms involved in insulin synthesis, release, and detection are highly regulated. Defects in any of the mechanisms involved in these processes can cause a metabolic imbalance, which is responsible for disease development. This review examines the essential elements of T2DM, as well as the molecular mechanisms and pathways involved in insulin metabolism, which contribute to T2DM and insulin resistance. [2]

**Cause**

Usually, a combination of things causes type 2 diabetes. They might include:

* Genes: Scientists have found different bits of DNA that affect how your body makes insulin.
* Weight: Having extra weight or obesity can cause insulin resistance.
* Metabolic syndrome: People with insulin resistance often have a group of conditions including high blood sugar, high blood pressure, and high cholesterol and triglycerides.
* Too much glucose from your liver: When your blood sugar is low, your liver makes and sends out glucose. After you eat, your blood sugar goes up, and your liver usually slows down and stores its glucose for later. But some people's livers don't. They keep making sugar.
* Bad communication between cells: Sometimes, cells send the wrong signals or don't pick up messages correctly. When these problems affect how your cells make and use insulin or glucose, this can lead to diabetes.
* Broken beta cells: If the cells that make insulin send it out at the wrong time, your blood sugar gets thrown off. High blood sugar) can damage these cells, too.

**Sign and Symptoms**

Diabetes symptoms may appear suddenly. Type 2 diabetes symptoms might be minor and may not be seen for many years.

Diabetes symptoms include:

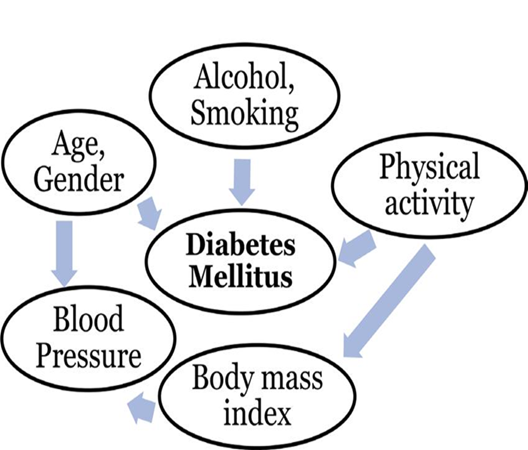
* excessive thirst.
* increased urination frequency.
* blurred vision.
* feeling tired.
* losing weight unintentionally.

Diabetes can eventually damage blood arteries in the heart, eyes, kidneys, and nerves. This disease is more likely to suffer from heart attacks, strokes, and renal failure. Diabetes can lead to irreversible vision loss by weakening the blood vessels in the eyes. Many diabetics experience foot difficulties due to nerve loss and insufficient blood flow. This can cause foot sores and ultimately to amputation.

**Diagnosis and tests**

The diagnosis of diabetes mellitus is easily established when a patient presents the classic symptoms of hyperglycemia and has a random blood glucose value of 200 mg/dL (11.1 mmol/L) or higher, and confirmed on another occasion. The following tests are used for the basic diagnosis: A fasting plasma glucose (FPG) test measures blood glucose in a person who has not eaten anything for at least 8 hours. This test is used to detect diabetes and prediabetes. 10 An oral glucose tolerance test (OGTT) measures blood glucose after a person fasts at least 8 hours and 2 hours after the person drinks a glucose-containing beverage. This test can be used to diagnose diabetes and prediabetes. The FPG test is the preferred test for diagnosing diabetes because of its convenience and low cost. However, it may miss some diabetes or prediabetes that can be found with the OGTT. The FPG test is most reliable when done in the morning. Research has shown that the OGTT is more sensitive than the FPG test for diagnosing prediabetes, but it is less convenient to administer [8].

A random plasma glucose test, also called a casual plasma glucose test, measures blood glucose without regard to when the person being tested last ate. This test, along with an assessment of symptoms, is used to diagnose diabetes but not prediabetes. Test results indicating that a person has diabetes should be confirmed with a second test on a different day (Twillman et al., 2002). The current WHO diagnostic criteria for diabetes should be maintained – fasting plasma glucose ≥ 7.0mmol/l (126mg/dl) or 2–h plasma glucose ≥ 11.1mmol/l (200mg/dl) (WHO., 1999). [8]

**Risk factor**

Type 2 diabetes is thought to have a strong genetic relationship, indicating that it runs in families. If you have a parent, brother, or sister who has it, your chances are higher. Several genes may be associated with type 2 diabetes. If you have any of the following risk factors, speak with your doctor about getting a diabetes test. High blood pressure.

High triglycerides: It is excessively high if it exceeds 500 (mg/dL).

Low HDL cholesterol levels: It is too low if it is less than 40 mg/dL in men and 50 mg/dL in women.

Gestational diabetes or the birth of a baby weighing more than 9 pounds.

**Prevension**

Lifestyle changes are the best way to prevent or delay the onset of type 2 diabetes.

To help prevent type 2 diabetes and its complications, people should:

* Reach and keep a health body weight.
* Stay physically active with at least 30 minutes of moderate exercise each day.
* Eat a healthy diet and avoid sugar and saturated fat.
* Not smoke tobacco.

**Treatment**

To manage type 2 diabetes:

* it's important to eat healthily. exercise regularly and lose excess weight.
* Possible diabetes medicine or insulin therapy.
* Blood glucose monitoring.
* These steps increase the likelihood that blood sugar will stay within a healthy level. They may also help to delay or avoid difficulties**.**

Healthy eating

There is no specific diabetes diet. To maintain a healthy diet, prioritize a consistent meal plan and nutritious snacks. Smaller serving sizes. Eat more fiber-rich foods such fruits, non-starchy vegetables, and whole grains. Consume fewer refined grains, starchy veggies, and sweets. Consume moderate amounts of low-fat dairy, meats, and fish. Use healthy cooking oils like olive or canola oil. Fewer calories.

Physical activity

Exercise is essential for losing or maintaining a healthy weight. It also helps to control blood sugar levels. Before beginning or changing your exercise regimen, consult with your healthcare professional to ensure that the activities are safe for you [6].

Aerobic exercise, Resistance exercise, Limit inactivity.

Weight loss

Weight loss leads to improved regulation of blood sugar, cholesterol, triglycerides, and blood pressure. If you are overweight, you may notice changes in these indicators after decreasing just 5% of your body weight. However, the more weight you lose, the greater the benefit to your health. In some cases, losing up to 15% of body weight may be recommended. Your health care provider or dietitian can assist you in setting suitable weight-loss goals and encouraging lifestyle changes that will help you achieve them.

Monitor your blood sugar

Your healthcare practitioner will advise you on how frequently you should check your blood sugar level to ensure you stay within your goal range. You may need to check it once a day, either before or after activity. If you use insulin, you may need to monitor your blood sugar levels many times each day.

Monitoring is often done at home using a little instrument known as a blood glucose meter, which measures the amount of sugar in a drop of blood. Keep a log of your measurements and share it with your healthcare staff. Continuous glucose monitoring is an electronic method that measures glucose levels every few minutes using a sensor inserted under the skin. Information may be transmitted to a mobile device, such as a phone, and the system can send alarms when levels get too high or low. [4]

**Type 2 Diabetes Medication**

If you can't maintain your target blood sugar level with diet and exercise, your health care provider may prescribe diabetes medications that help lower glucose levels, or your provider may suggest insulin therapy. Medicines for type 2 diabetes include the following.

Metformin.

Sulfonylureas.

Meglitinides.

Thiazolidinediones TZDs.

DPP-4 inhibitors.

GLP-1 receptor agonists.

SGLT2 inhibitors.

Insulin.

**Nursing Intervention**

Assessing the patient for type 2 diabetic problems and giving patient education on the plan of treatment, optimal food intake, exercise guidelines, and the recommended medication regimen if needed.

Lifestyle adjustments (including dietary changes and exercise to encourage weight loss), self-care measures, and sometimes medicines, can reduce the risk of diabetes and cardiovascular (heart-related) complication.

Encourage a healthy lifestyle through regular physical activity and a well-balanced diet. Keep sugar, fat, and salt at a minimum.

Instruct the patient on the need of accurate insulin preparation and meal timing to avoid hypoglycemia.

To avoid hypoglycemia, advise the patient to check his or her blood glucose level before engaging in vigorous activity and to have a carbohydrate snack beforehand.

Examine the feet and legs for skin temperature, feeling, soft tissue injuries, corns, calluses, dryness, hair distribution, pulses, and deep tendon reflexes.

Protecting the foot from disintegration helps to maintain skin integrity.

To minimize vasoconstriction and improve peripheral flow, advise patients who smoke to quit or modify their smoking habits.

Examine patients for cognitive or sensory deficits that may affect their ability to deliver insulin correctly. [5]

**What is the adherence of Type 2 Diabetics?**

Individuals with diabetes frequently struggle with regimen adherence, making achieving glycemic control challenging. Because adequate adherence reduces the risk of diabetic complications, patient noncompliance with treatment recommendations is sometimes stressful for diabetes health care professionals. This article examines the magnitude of the adherence problem and the underlying causes. The author addresses the notions of compliance and adherence and makes ideas for enhancing adherence by adopting a more collaborative style of treatment that emphasizes patient autonomy and choice [7].

Chapter Two

**Methodology**

**2.1. Design of the study:**

A descriptive study to assess treatment regimen adherence among type 2 diabetes mellitus patients.

**2.2. Duration of the study:**

This study performed from (20-Dec-2023) to (20-Apr-2024).

**2.3. Sample of the study:**

A purposive sample of total 50 people, from different Erbil hospitals. Were selected randomly.

**2.4. Setting of the study:**

Study was conducted at Shaqlawa Hospital, Qarachux Hospital, Mexmur Hospital and Rozh Medical Society.

**2.5. Method and tool of data collection:**

A questionnaire was prepared to assess treatment regimen adherence among type 2 diabetes mellitus patients. Also another special form was prepared to collect biographic data about participants.

**2.6. Ethical considerations:**

The agreement of participants was taken verbally to participate in the study.

**2.7. Statistical analysis:**

Data management and statistical analysis: Data recorded on a specially designed questionnaire, collected and included number and percentages of each category of questionnaire. the results presented as numbers & percentage collected data was analyzed by Excel program.

Chapter Three

**Result**

Table No1. Age of Participants

|  |  |  |  |
| --- | --- | --- | --- |
| Table(1) Age of participants | | | |
| N | Age | frequency | percentage |
| 1 | 15-25 | 2 | 4% |
| 2 | 25-40 | 8 | 16% |
| 3 | 40-55 | 20 | 40% |
| 4 | >55 | 20 | 40% |

**Table (1):**

In this research out of 50 patients was according to age , 4%(2)patients was between (15-25).8%(4)patients was between (25-40).40%(20)patients was between (40-55).40%(20) patients was above(55).

Table No2. Gender of Participants

|  |  |  |  |
| --- | --- | --- | --- |
| Table(2) Gender | | | |
| N | Gender | frequency | percentage |
| 1 | Male | 23 | 46% |
| 2 | Female | 27 | 54% |

**Table (2):**

Out of 50 patients according to gender, 46% (23) was male, 54 % (27) was female.

Table No 3. Location of hospitals

|  |  |  |  |
| --- | --- | --- | --- |
| N | Location | Frequency | Percentage |
| 1 | Qarachux  Hospital | 23 | 46% |
| 2 | Mexmur  Hospital | 9 | 18% |
| 3 | Shaqlawa  Hospital | 11 | 22% |
| 4 | Roj Medical  Society | 7 | 14% |

**Table (3):**

Out of 50 patients according to hospital , 46% (23 )patients was in qarachwx hospital , 18% (6) patients was in maxmur hospital , 22% (11) was in shaqlawa hospital.14%(7) patients was in rozh medical society.

Table No4. Level of Education Participants

|  |  |  |  |
| --- | --- | --- | --- |
| Table (4) Level of Education | | | |
| N | Level of  Education | Frequency | Percentage |
| 1 | illiterate | 16 | 32% |
| 2 | basic | 15 | 30% |
| 3 | High School | 7 | 14% |
| 4 | Universty | 12 | 24% |

**Table (4):**

out of 50 patients according to level of education.32%(16)patients was illiterate.30%(15)patients was basic.14%(7)patients was high school.24%(12)patients was university.

Table No5. Material status Participants

|  |  |  |  |
| --- | --- | --- | --- |
| Table (5) Material status | | | |
| N | Material status | frequency | Percentage |
| 1 | Single | 7 | 14% |
| 2 | Married | 43 | 86% |

**Table (5):**

Out of 50patients according to material state ,14% (7) patients was single, 86% (43) patients was married.

Table No6. Residency of Participants

|  |  |  |  |
| --- | --- | --- | --- |
| Table (6) residency of participants | | | |
| N | accommodation | frequency | Percentage |
| 1 | City | 18 | 36% |
| 2 | Out Side City | 25 | 50% |
| 3 | Village | 7 | 14% |

**Table (6):**

out of 50 patients according to accommodation.36%(18) patients was live in city.50%(25) patients was live in outside city.14%(7)patients was lived in villages.

**Table No7. Assess treatment regimen adherence among type 2 DM patients**

|  |  |  |  |
| --- | --- | --- | --- |
| No: | Questions: | Yes | No |
| 1 | Do you find it difficult to remember to take your diabetes medication as prescribed? | 48% | 52% |
| 2 | Have you ever missed a dose of your medication? | 80% | 20% |
| 3 | Do you experience any side effects from your diabetes medication? | 54% | 46% |
| 4 | Are there any specific challenges or barriers that make it hard for you to adhere to your medication regimen? | 56% | 44% |
| 5 | How confident are you in your understanding of how and when to take your diabetes medication | 64% | 36% |
| 6 | Do you experience any challenges in remembering to take your diabetes medication at the same time every day? | 60% | 40% |
| 7 | Have you ever intentionally skipped taking your diabetes medication? | 32% | 68% |
| 8 | Do you feel that the cost of your diabetes medication is a barrier to consistent adherence? | 62% | 38% |
| 9 | Do you feel that your healthcare provider has adequately explained the importance of taking your diabetes medication as prescribed? | 60% | 40% |
| 10 | Do you find it easier to remember to take your diabetes medication when you have a daily routine? | 66% | 34% |
| 11 | Do you feel that having a support system or reminders from loved ones would help you remember to take your diabetes medication? | 62% | 38% |
| 12 | Have you ever experienced any side effects from your diabetes medication that made you hesitant to take it? | 54% | 46% |
| 13 | Do you feel that your diabetes medication has had a positive impact on managing your symptoms? | 66% | 34% |
| 14 | How would you rate the overall effectiveness of your diabetes medication in controlling your blood sugar levels? | 68% | 32% |
| 15 | When you feel like your diabetes is under control, do you sometimes stop taking your medicine? | 52% | 48% |
| 16 | Do you ever feel hassled about sticking to your treatment plan? | 46% | 54% |
| 17 | Do you always take your medication at the appropriate time? | 54% | 46% |
| 18 | Should type 2 diabetics have their blood glucose checked daily? | 60% | 40% |

**Table (7):**

* In the second question had the highest rate of patient non adherence (80%), which asked whether your patient missed any doses.
* Fortunately, the lowest percentage of patients in question 7, (68%) asked whether patients do not take diabetes medication on purpose, thus diabetic patients take their medication if they remember.

Chapter four

**Discussion**

This study assessed patients’ knowledge of adherence to type 2 diabetes medications as one of the objectives of assessing type 2 diabetes awareness among patients,

The purpose of this study was conducted to measure adherence to medications. +more than half (56%) of the participants were aged (25-55) most of whom lived outside the city, with 50% urban residents (36%) and rural residents (14%)، Some of them completed primary education (30%), some of them completed high school (14%), some of them were in university (24%) and some of them were illiterate (32%).

- In the second question had the highest rate of patient non adherence (80%), which asked whether your patient missed any doses.

- Fortunately, the lowest percentage of patients in question 7, (68%) asked whether patients do not take diabetes medication on purpose, thus diabetic patients take their medication if they remember. But still 32% of participants may neglect their medications, even if they remember it. It is not an ideal result so we have to search to identify the causes of this lack of adherence and we have to try to reverse it.

The study found that patients are somewhat adherent to treatment, due to the information provided by doctors and nurses, but there are still some patients who do not take medication carefully, We recommend that patients be more aware and receive more instructions to adhere well to medication use.

Chapter Five

**5.1 conclusion**

The study found that patients are somewhat adherent to treatment, due to the information provided by doctors and nurses, but there are still some patients who do not take medication carefully.

Finally, as a result of the study, we found that their knowledge of assessing the adherence of type 2 DM patients is good, but some of their problems, such as poor health education, are one of the barriers to raising awareness. population 2. DM other barriers to raising awareness (weak health education or family education).

**5.2 recommendation**

1. Many patients forget to take their medication on time so we need to remind them through phone calls and or apps and set up a schedule to encourage taking medication.

2. A lot of patients stop taking their medications after feeling well, and more guidance, education, and programs are needed to keep them using the medications and improve patient health.

3. Schedule regular follow-up appointments to assess progress and discuss any concerns about type 2 diabetes.

4. Patient Education Provide detailed information about the importance of adherence and how to effectively manage diabetes.

**Questionnaire**

Thank you for participating in this research.

Please answer these questions.

* **Part one:** Date collection form Age:

Gender: female male

The economic situation: good middle bad

Marital status: single married

Residency: city Outside the city village

Level of education: illiterate Basic Hight school university

* **Part two:** Nurse’ information about type2 diabetes.Answer these question by Yes or No.

|  |  |  |
| --- | --- | --- |
| No question | Yes | No |
| 1. Do you find it difficult to remember to take your diabetes medication as prescribed? |  |  |
| 2. Have you ever missed a dose of your medication? |  |  |
| 3. Do you experience any side effects from your diabetes medication? |  |  |
| 4. Are there any specific challenges or barriers that make it hard for you to adhere to your medication regimen? |  |  |
| 5. How confident are you in your understanding of how and when to take your diabetes medication? |  |  |
| 6-Do you experience any challenges in remembering to take your diabetes medication at the same time every day? |  |  |
| 7-Have you ever intentionally skipped taking your diabetes medication? |  |  |
| 8-Do you feel that the cost of your diabetes medication is a barrier to consistent adherence? |  |  |
| 9-Do you feel that your healthcare provider has adequately explained the importance of taking your diabetes medication as prescribed? |  |  |
| 10-Do you find it easier to remember to take your diabetes medication when you have a daily routine? |  |  |
| 11.Do you feel that having a support system or reminders from loved ones would help you remember to take your diabetes medication? |  |  |
| 12.Have you ever experienced any side effects from your diabetes medication that made you hesitant to take it? |  |  |
| 13.Do you feel that your diabetes medication has had a positive impact on managing your symptoms? |  |  |
| 14.How would you rate the overall effectiveness of your diabetes medication in controlling your blood sugar levels? |  |  |
| 15. When you feel like your diabetes is under control, do you sometimes stop taking your medicine? |  |  |
| 16. Do you ever feel hassled about sticking to your treatment plan? |  |  |
| 17. Do you always take your medication at the appropriate time? |  |  |
| 18. Should type 2 diabetics have their blood glucose checked daily? |  |  |

**Reference**

1. *Centers for Disease Control and Prevention. Diabetes Public Health Resource: Incidence ang Age at Diagnosis. 2013. [2015 January 27].*[*http://www​.cdc.gov/diabetes​/statistics/incidence\_national​.htm*](http://www.cdc.gov/diabetes/statistics/incidence_national.htm)*.*
2. *Lillioja S, Mott DM, Spraul M, Ferraro R, Foley JE, Ravussin E, Knowler WC, Bennett PH, Bogardus C. Insulin resistance and insulin secretory dysfunction as precursors of non-insulin-dependent diabetes mellitus. N Engl J Med 1993; 329: 1988– 1992 [*[*PubMed*](https://pubmed.ncbi.nlm.nih.gov/8247074)*] [*[*Google Scholar*](https://scholar.google.com/scholar_lookup?journal=N+Engl+J+Med&title=Insulin+resistance+and+insulin+secretory+dysfunction+as+precursors+of+non-insulin-dependent+diabetes+mellitus&author=S+Lillioja&author=DM+Mott&author=M+Spraul&author=R+Ferraro&author=JE+Foley&volume=329&publication_year=1993&pages=1988-1992&pmid=8247074&)*].*
3. *DeFronzo RA. Lilly Lecture: The triumvirate: β-cell, muscle, liver: a collusion responsible for NIDDM. Diabetes 1988; 37: 667– 687 [*[*PubMed*](https://pubmed.ncbi.nlm.nih.gov/3289989)*] [*[*Google Scholar*](https://scholar.google.com/scholar_lookup?journal=Diabetes&title=Lilly+Lecture:+The+triumvirate:+%CE%B2-cell,+muscle,+liver:+a+collusion+responsible+for+NIDDM&author=RA+DeFronzo&volume=37&publication_year=1988&pages=667-687&pmid=3289989&)*].*
4. *Diabetics in Americas. National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases.*
5. *Inzucchi SE, Bergenstal RM, Buse JB, et al. Management of hyperglycemia in type 2 diabetes: A patient-centered approach: Position statement of the American Diabetes Association (ADA) and the European Association for the Study of Diabetes (EASD).*
6. *Patient medication adherence: measures in daily practice. Jimmy B, Jose J. Oman Med J. 2011;26:155–159. [*[*PMC free article*](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3191684/)*] [*[*PubMed*](https://pubmed.ncbi.nlm.nih.gov/22043406)*] [*[*Google Scholar*](https://scholar.google.com/scholar_lookup?journal=Oman+Med+J&title=Patient+medication+adherence:+measures+in+daily+practice&volume=26&publication_year=2011&pages=155-159&pmid=22043406&)*].*
7. *Medication adherence in diabetes mellitus and self management practices among type-2 diabetics in Ethiopia. Wabe NT, Angamo MT, Hussein S. N Am J Med Sci. 2011;3:418–423. [*[*PMC free article*](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3271397/)*] [*[*PubMed*](https://pubmed.ncbi.nlm.nih.gov/22362451)*] [*[*Google Scholar*](https://scholar.google.com/scholar_lookup?journal=N+Am+J+Med+Sci&title=Medication+adherence+in+diabetes+mellitus+and+self+management+practices+among+type-2+diabetics+in+Ethiopia&volume=3&publication_year=2011&pages=418-423&pmid=22362451&)*].*
8. *Self-monitoring of blood glucose by adults with diabetes in the United States population. Harris MI, Cowie CC, Howie LJ. Diabetes Care. 1993;16:1116–1123. [*[*PubMed*](https://pubmed.ncbi.nlm.nih.gov/8375241)*] [*[*Google Scholar*](https://scholar.google.com/scholar_lookup?journal=Diabetes+Care&title=Self-monitoring+of+blood+glucose+by+adults+with+diabetes+in+the+United+States+population&volume=16&publication_year=1993&pages=1116-1123&pmid=8375241&)*].*
9. *WHO. Global report on diabetes. World Health Organization (WHO), editor. Geneva, Switzerland: World Health Organization; 2016. Available from:*[*http://www.who.int/about/licensing/*](http://www.who.int/about/licensing/)*. Retrieved on 12th November 2021.*

**پوخـــــتە**

*تەندروستی گشتییە. پابەندبوون بە دەرمانی دژە شەکرە کۆنترۆڵی گلایسیمیک باشتر دەکات، کە لە بەرامبەردا ڕێگری لە ئاڵۆزییەکان دەکات و هەروەها خەرجییەکانی دەرەوەی گیرفانیش کەمدەکاتەوە. ڕێکخراوی تەندروستی جیهانی ئاماژە بەوە دەکات کە کاریگەری ئەو دەستێوەردانانەی کە ئاراستە دەکرێن بۆ باشترکردنی پابەندبوون کاریگەری زۆر زیاتری هەیە لە چاو دەستێوەردانەکانی پزیشکی تایبەت. چەند هۆکارێک هەن کە بەشدارن لە خراپی پابەندبوون پێوانەکردنی پابەندبوون بە دەرمان لە نێوان ئەو نەخۆشانەی کە تووشی نەخۆشی شەکرە بوون. بۆ دیاریکردنی هۆکارە مەترسییە جیاوازەکان کە کاریگەرییان لەسەر پابەندبوون بە دەرمان هەیە. بۆ زانینی پەیوەندی کوالیتی ژیانی پەیوەست بە تەندروستی لەگەڵ پابەندبوون بە دەرمان. . چەندین هۆکار بەشدارن لە پابەندنەبوون، کە بریتین لە خەرجییەکانی دەرەوەی گیرفان، خوێندەواری، نەبوونی هۆشیاری و پشتیوانییەکی ناتەواوی خێزان یان کۆمەڵگا. چەندین نەخۆشی و فرە دەرمانسازی لە نێوان گەورەساڵانی بەتەمەندا تەحەدای زیاترن بۆ پابەندبوون بە دەرمان. دابەشکردنی نایەکسانی دابینکەرانی تەندروستی لە نێوان ناوچە شارییەکان و گوندەکاندا و نۆرمەکانی کولتووری بەربەستن لەبەردەم پابەندبوون بە دەرمانەکان. لەبیرچوون بەهۆی نەخۆشی هاوبەشی دەروونی زۆر بەشدارە لە پابەندنەبوون. ئەم توێژینەوەیە لە مانگی کانوونی دووەمی ٢٠٢٤ تا نیسانی ٢٠٢٤ ئەنجامدراوە، کۆی گشتی ٥٠ نەخۆش لە نەخۆشخانە جیاوازەکانی هەولێرەوە هەڵبژێردران بۆ بەشداریکردن لە توێژینەوەکەدا دوای ڕەچاوکردنی ئەخلاقی. پرسیارنامەیەکی خۆداڕێژراو ئامادەکرا بۆ هەڵسەنگاندنی داتای ژیاننامەی بەشداربووان و هەروەها پراکتیکی نەخۆش سەبارەت بە هەڵسەنگاندنی پابەندبوون بە ڕێژیمی چارەسەرکردن لە نێوان نەخۆشانی جۆری دووەمی شەکرە.*

**الخلاصة**

*إنها الصحة العامة. يؤدي الالتزام بالأدوية المضادة لمرض السكر إلى تحسين التحكم في نسبة السكر في الدم، مما يؤدي بدوره إلى منع المضاعفات وكذلك تقليل النفقات النثرية. وتشير منظمة الصحة العالمية إلى أن تأثير التدخلات الموجهة نحو تحسين الالتزام له تأثير أكبر بكثير من التدخلات الطبية الخاصة. هناك العديد من العوامل التي تساهم في ضعف الامتثال.قياس الالتزام بتناول الدواء لدى مرضى السكري. التعرف على عوامل الخطر المختلفة التي تؤثر على الالتزام بتناول الدواء. لمعرفة العلاقة بين نوعية الحياة المتعلقة بالصحة والالتزام بتناول الدواء*

*وتساهم عدة عوامل في عدم الامتثال، بما في ذلك النفقات النثرية، ومحو الأمية، ونقص الوعي، وعدم كفاية الدعم الأسري أو المجتمعي. تمثل الأمراض المصاحبة المتعددة وتعدد الأدوية بين كبار السن تحديات إضافية أمام الالتزام بالأدوية. يعد التوزيع غير العادل لمقدمي الخدمات الصحية بين المناطق الحضرية والريفية والأعراف الثقافية من العوائق التي تحول دون الالتزام بالدواء. فقدان الذاكرة الناجم عن الاعتلال النفسي المصاحب يساهم بشكل كبير في عدم الامتثال. أجريت الدراسة من يناير 2024 إلى أبريل 2024 وتم اختيار ما مجموعه 50 مريضا من مستشفيات مختلفة في أربيل للمشاركة في الدراسة بعد اعتبار أخلاقي. تم إعداد استبيان ذاتي الصياغة لتقييم بيانات السير الذاتية للمشاركين وكذلك ممارسة المريض فيما يتعلق بتقييم الالتزام بنظام العلاج بين مرضى داء السكري من النوع الثانوي.*

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وەزارەتی خوێندنی باڵاو توێژینەوەی زانستی

زانکۆی پۆلیتەکنیکی هەولێر

کۆلێژی تەکنیکی شەقڵاوە

بەشی پەرستاری

قۆناغی دووەم

پڕۆژەی دەرچوون (توێژینەوە) بۆکۆلێژی تەکنیکی شەقڵاوە

دەربارەی *( هەڵسەنگاندنی پابەندبوون بە ڕێژیمی چارەسەرکردن لە نێوان نەخۆشانی جۆری دووەمی شەکرە)*

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(2024-2023)