

## Correlation between Adherence to Medication and social support on Patients with Diabetes Mellitus

Ali Hasan Showaya, MScN<sup>1</sup>, Kadhim, Alaa Jawad, PhD<sup>2</sup>

<sup>1</sup> Clinical Nurse Specialist, Baghdad teaching Hospital, Ministry of Health and Environment.

[ali.hasan2102m@conursing.uobaghdad.edu.iq](mailto:ali.hasan2102m@conursing.uobaghdad.edu.iq)

<sup>2</sup> Asst. Prof. Dr, University of Baghdad, College of Nursing, adult Nursing Department, Iraq.

[alaa@conursing.uobaghdad.edu.iq](mailto:alaa@conursing.uobaghdad.edu.iq)

### Abstract

**Objective(s):** To find out the correlation between adherence to medication refill scale and social support scale for patients with type 2 diabetes.

**Methodology:** a descriptive study design in Baghdad Teaching Hospital. It was conducted on 110 patients with diabetes. After that, a checklist was drawn up consisting of three parts: the first part: the demographic characteristics of the patients, and the second part: it consists of a global model examined to know the adherence to medication and medication refill and specific social support scale for patient with diabetes mellitus.

**Result:** The results showed that the majority of patients are not adherence to refilling the medications, the social support was light (weak) and there is strong correlation between adherence and social support.

**Conclusions:** The study proved that more than half of the sample did not adhere to refilling the medication for type 2 diabetes patients, and the social support was light.

**Keywords:** Medication, adherence, social support, DM

### Introduction

Diabetes mellitus (DM), a category of metabolic illnesses characterized by increased blood glucose levels, is referred to as <sup>(1)</sup>. In addition to negatively affecting people's health, the expansion of diabetes has enormous negative effects on the economy, society, and development, particularly in underdeveloped nations or populations that lack the motivation to create personal health policies <sup>(2)</sup>. For patients with type 1 diabetes and some patients with type 2 diabetes, insulin is the cornerstone in managing hyperglycemia. Treatment with the existing insulin administration devices, exercise, and calorie counting should be highlighted <sup>(3)</sup>. T1DM and T2DM diabetes are characterized by chronic inflammation; both diseases involve pancreatic islet inflammation, while systemic low-grade inflammation is a feature of

obesity and T2DM diabetes <sup>(4)</sup>. People with type 2 diabetes can often manage their condition without insulin therapy <sup>(5)</sup>. Alternative treatment options include lifestyle and dietary changes and non- insulin medications, such as metformin. However, if a person is unable to control their blood sugar levels using these treatments, a doctor may recommend insulin therapy <sup>(6)</sup>.

### Methodology:

A descriptive study design to find out the correlation between medication adherence and social support for patients with DM. The sample consisted of T2DM diabetes patients who consented to participate in the study. A sample size of 110 patients. Data were collected from patients with diabetes, by interview.

**Table (1): The Distribution of the Patients' responses to medication adherence.**

Scale	Responses	Ass.
Total mean score for ARMS_12	27.93	Non- adherent

Cut off point of table (1) for total mean score = ( $\geq 16$ ), value  $\geq 16$  = non-adherent, value  $< 16$  = adherent.

Table 1. showed that the study sample were not adherent to medication refill at mean score (27.93) higher than .

**Table (2): The Distribution of the Patients' responses according to social support.**

Scale	Responses	Ass.
-------	-----------	------

Total mean score for MSSS-8	1.58	Mild Support
-----------------------------	------	--------------

Table (2) = 0.8, Ass. = Assessment level, (0 – 0.8 = poor social support), (0.81 – 1.6 = mild support), (1.61 – 2.4 = moderate support).

Table 2. showed that social support to T2DM patient was mild with total mean score (1.58), and there was mild to moderate support as shown in each item

**Table (3): Correlation between Social Support on Medication Refill of Patients with Type II Diabetes Mellitus.**

score	N	df	Chi Square	P.value	Sig.
Social Support/ Medication Refil	110	8	86.85	0.003	H.S

N= number, Sig.= Significant, df= degree of freedom, H.S= High Significant at P<0.05

Table (3) presented highly significant relationship between social support and medication refill of patients with Diabetic Mellitus at P = 0.003.

**DISCUSSION:** Regarding to Patients’ responses to medication and refill compliance showed that the study sample were not adherent to drug refill at mean score (27.93%) higher than 16, (Cut off point for total mean score =  $\geq 16$ ). Cut off point for items = 0.75, (1 – 1.75 = H-high adherence), (1.76 – 2.5 = M-moderate adherence), (2.51 – 3.25 = L-low adherence), (3.26 – 4 = N-no- adherence). table (4.2). The researchers Prabahar et al. (2020), in Kingdom Saudi Arabia, Assessment of Medication Adherence in Patients with Chronic Diseases. A cross-sectional study, a total of (208) participants participated in the study, this study showed that 159 (76.44%) participants were adherent to their medications and nearly one-quarter of patients were no adherent to their medications <sup>(7)</sup>. A descriptive cross-sectional study was used to assess Depression Among Patients with Type 2 Diabetes Mellitus: Prevalence and Associated Factors. The study comprised (216) inpatients, according to Adherence to diabetic treatment. The result poor/no adherence <sup>(8)</sup>. A cross-sectional study in Australia and Iraq. A cross-sectional multi-center comparative study. To Assess Medication adherence and predictive factors in patients with cardiovascular disease: A comparison study between Australia and Iraq. The result poor medication adherence <sup>(9)</sup>. A cross-sectional study in Cameroon, to Assess Adherence to antidiabetic medication and factors associated with non-adherence among patients with type-2 diabetes mellitus. For (195) patients, the prevalence of non-adherence to medication was (54.4%) <sup>(10)</sup>. Regarding to responses according to social support. Showed that social support to patient was mild with mean score (1.58%), and there was mild to moderate support. A cross-sectional study about the patients to Assess The buffering effect of social support on diabetes distress and depressive symptoms in adults

with Type 1 and Type 2 diabetes. For (325) patients. Social support subscale analyses showed tangible support <sup>(11-13)</sup>. A cross-sectional study to Assess the Medication adherence and predictive factors in patients with cardiovascular disease. For (120) patients. Patients with cardiovascular disease for whom social support <sup>(14)</sup>. The Medication adherence and predictive factors in patients with cardiovascular disease. For (120) patients. Patients with cardiovascular disease for whom social support was not enough <sup>(15)</sup>.

**Reference:**

1. Ahmed FF, Hassan HB. Effectiveness of an Instructional program on Patients with Ulcerative Colitis Adherence for Medication and Diet to Prevent Colorectal Cancer: Case and Control Study. *Iraqi National Journal of Nursing Specialties*. 2022;35(1)
2. Mansour KA. Effectiveness of an educational program on nurses' knowledge regarding management of extravasation vesicant intravenous chemotherapy at oncology centers in Baghdad city. *Iraqi National Journal of Nursing Specialties*. 2019;32(2).
3. Prabahar, K., Albalawi, M. A., Almani, L., & Alenizy, S. (2020). Assessment of medication adherence in patients with chronic diseases in Tabuk, Kingdom of Saudi Arabia. *Journal of Research in Pharmacy Practice*, 9(4), 196.
4. V., & Toan, N. D. (2020). Diabetes-related distress and its associated factors among patients with diabetes in Vietnam. *Psychology Research and Behavior Management*, 1181-1189. Kedah, Malaysia. *Med. J. Malaysia*, 74, 103-108.
5. Al-Ganmi, A. H. A., Al-Fayyadh, S., Abd Ali, M. B. H., Alotaibi, A. M., Gholizadeh, L., & Perry,

- L. (2019). Medication adherence and predictive factors in patients with cardiovascular disease: A comparison study between Australia and Iraq. *Collegian*, 26(3), 355-365.
6. Aminde, L. N., Tindong, M., Ngwasiri, C. A., Aminde, J. A., Njim, T., Fondong, A. A., & Takah, N. F. (2019). Adherence to antidiabetic medication and factors associated with non-adherence among patients with type-2 diabetes mellitus in two regional hospitals in Cameroon. *BMC endocrine disorders*, 19(1), 1-9.
7. Beverly, E. A., Ritholz, M. D., & Dhanyamraju, K. (2021). The buffering effect of social support on diabetes distress and depressive symptoms in adults with type 1 and type 2 diabetes. *Diabetic Medicine*, 38(4), e14472
8. Al-Ganmi, A. H. A., Alotaibi, A., Gholizadeh, L., & Perry, L. (2020). Medication adherence and predictive factors in patients with cardiovascular disease: A cross-sectional study. *Nursing & Health Sciences*, 22(2), 454-463.
9. . Khudhair SS, Ahmed SA. Type 2 Diabetic Patients' Knowledge Regarding Preventive Measures of Diabetic Foot. *Iraqi National Journal of Nursing Specialties*. 2022;35(2).
10. Abees A, Mohammed W. Effectiveness of an Educational Program on Nursing Staffs' Knowledge about Uses of Steroids and Their Side Effects in Al-Diwaniya Teaching hospital. *Iraqi National Journal of Nursing Specialties*. 2020;33(2):76-84
11. Salman AD, Bakey SJ. Detection the Level of Anxiety and Depression among Diabetic Foot Patients at Al-Najaf Al-Ashraf Teaching Hospitals. *Indian Journal of Forensic Medicine & Toxicology*. 2021 Sep 5;15(4):3208-17.
12. Madran DM, Jassim AH. Self-Efficacy among Type 2 Diabetic Patients. *Pakistan Journal of Medical & Health Sciences*. 2022 Apr 28;16(03):886-.
13. Kadhim, A.J., Abed, R.I. and Hattab, W.A.A., 2021. Effect of Training sessions Oniraqi Nurses' Practice Concerning Patients In Phase Post-Anesthesia Care At Ghazi Al-Hariri Surgical Specialities Hospital. *NVEO-NATURAL VOLATILES & ESSENTIAL OILS Journal/ NVEO*, pp.9396-9403.
14. 1. Salman A, Bakey S. Determination of the Level of Depression among Diabetic Foot Patients at Al-Najaf Al-Ashraf Teaching Hospitals. *Kufa Journal for Nursing Sciences*. 2021 Dec 30;11(2):154-64.
15. Kadhim, A.J., Nurses' Practices and Side Effects following the first dose of Pfizer Vaccine Injection at Iraqi Health Centers Affiliated to COVID-19.