

Application of Medication-Specific Social Support Scale on Patients with Type II Diabetes Mellitus

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ABSTRACT

Background: Poor medication adherence is associated with social support the difficulty of the regimen, socio-economic status, mental health issues, and drug side effects especial with elderly type 2 diabetic mellitus (T2DM).

Objective(s): to evaluate the application of social support scale for patients with type 2 diabetes.

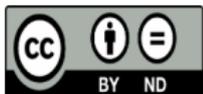
Methodology: The quantitative study used a descriptive study design in Baghdad Teaching Hospital / Medical City Department, and Imam Ali A.S. Hospital / Rusafa Health Department. It was conducted on patients with type 2 diabetes. It started from the 5th of January 2023 to the May 15th, 2023. A non-probability sampling technique (110) patients was chosen to achieve the objectives of the study. After that, a checklist was drawn up consisting of two parts: the first part: the demographic characteristics of the patients, and the second part: it consists of a global scale examined to know the social support for patients with type 2 diabetes.

Results: The results of the study showed that there is little social support for most items of evaluated scale and the patients' non-adherence to refilling medication with an average higher than the cut-off point (16), which is (27.93).

Conclusion: The study concludes that the social support for patients with type 2 diabetes was mild (weak).

Recommendations: The researcher recommends encouraging medical counseling units to conduct educational workshops and seminars for patients about social support and its importance for patients with type 2 diabetes.

Keywords: Application scale, T2DM, social support



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INTRODUCTION

Diabetes mellitus (DM), a category of metabolic illnesses characterized by increased blood glucose levels, is referred to as. 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 (Khudhair & Ahmed, 2022).

According to estimates, 8.4% of persons over the age of 18 have diabetes in a given year, and that number is expected to rise to 9.9% by 2045 (Salman, Bakey, 2021).

In order to prevent or delay problems and maintain quality of life, type 2 diabetic mellitus (T2DM) must be managed as a chronic, complicated condition requiring multifactorial behavioural and pharmaceutical treatments. Managing blood sugar levels, weight, cardiovascular risk factors, comorbidities, and consequences are included in this). This calls for the delivery of care to be planned and structured, as in the chronic care model, and to incorporate a person-centered strategy to increase participation in self-care activities (Kadhim, 2022).

type 1 diabetic mellitus 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 (Jasim, 2022).

Patients with T1DM and some patients with T2DM, insulin is the corner-stone in managing hyperglycaemia. Treatment with the existing insulin administration devices, exercise, and calorie counting should be highlighted (Abees & Mohammed, 2020).

People with T2DM can often manage their condition without insulin therapy. 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 (Madran & Jassim, 2022).

Social support has been described as "support accessible to an individual through social ties to other individuals, groups, and the larger community". social support is the most vulnerable for hopelessness and anxiety. social support from peers and significant others even in the absence of family support play an important protective role in hopelessness and anxiety (Li & Luo, 2021).

Mansour (2019), has proposed that social support is especially important for females who respond to stress with a 'tend and befriend' approach in which friendship and social closeness are key components of stress management for females. Social support describes different aspects of an individual's social world.

METHOD

Quantitative study used descriptive study design to evaluate social support in patients with T2DM. The study was started from the 5th of January 2023 to the May 15th, 2023.

The place of the study was in Baghdad Teaching Hospital, and Al-Imam Ali Hospital, where patient information was taken from all hospital departments

The sample consisted of T2DM patients who consented to participate in the study. The non-probability and convenient sampling method. A sample size of (110) patients was calculated to demonstrate a moderate sized effect ($\alpha = 0.05$, 5% level of significance). The sample size was calculated based on a formula by (Ellen, 2012). Taking into consideration the possibility of as much as 50% nonresponse due to the busy clinical environments in which recruitment occurred, the sample was increased to (150) patient. In total, 110 participants were recruited.

Medication Specific Social Support (MSSS) scale by Lehavot (2011) that consist of 8 items. This scale with high reliability value ($\alpha = 0.85$). Arabic version that was conducted by Al-Ganmi et al. (2020) to evaluate outpatient cardiac rehabilitation. The patients' responses were scored by Likert scale with five values ranged from 0 = never to 4 = very often. The level of social support was assessed at (0 - 0.8 = poor social support, 0.81 - 1.6 = mild support, 1.61 - 2.4 = moderate support, 2.41 - 3.2 = good support, 3.21 - 4 = high support).

Data were collected from patients with T2DM, by interview where the objectives of the study were explained to all participants, where the patients were evaluated through the use of scale questions, specific social support scale questions.

Statistical analysis

Use Statistical Package for Social Sciences version 24.0 is used to analyse the data. The following statistical data analysis techniques (frequency, percentage, mean of score, cut off

point and stander deviation) were used to analyse and evaluate the study's findings.

RESULTS

Table (1) showed that mean age of the study sample was approximately 53,88 years old. Moreover, 55.5 percent of the study sample were

females and the remaining were males. In addition, 67.3 percent of the study sample were married, and the highest percent 46.4 have primary school graduation. Approximately, 43.7 percent of the study sample have chronic diseases.

Table 1. The Distribution of the Study Samples according to the Demographic Characteristics.

| Variable | Groups | F | % |
|------------------------|--------------------|---------|-------|
| Age group | 20 - 29 | 5 | 4.5 |
| | 30 – 39 | 10 | 9.1 |
| | 40 – 49 | 22 | 20 |
| | 50 – 59 | 31 | 28.2 |
| | 60 – over | 42 | 38.2 |
| | Mean, SD | 53.88 | 13.86 |
| Variable | Groups | F. | % |
| Gender | Male | 49 | 44.5 |
| | Female | 61 | 55.5 |
| Marital Status | Single | 10 | 9.1 |
| | Married | 74 | 67.3 |
| | Divorced | 14 | 12.7 |
| | Widowed /Divorced | 11 | 10 |
| | Separate | 1 | 0.9 |
| | Education level | Primary | 51 |
| | Intermediate | 26 | 23.6 |
| | Preparatory | 20 | 18.2 |
| | Institute/ college | 11 | 10 |
| | Higher education | 2 | 1.8 |
| Other Chronic diseases | No | 58 | 52.7 |
| | Yes | 52 | 47.3 |
| Variable | Groups | F | % |

F.: frequency, %: percentage, SD: stander deviation

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 2. The Distribution of the Patients’ responses according to social support (MSSS-eight items).

| List | Items | Responses | | | | | Mean | Ass. |
|------------------|---|-----------|--------|----------|-------------------|---------|--------------|---------------|
| | | Never | Rarely | Sometime | Most of the times | Usually | | |
| 1 | Helped you monitor your symptoms and medicines side effects? | 36 | 26 | 25 | 8 | 15 | 1.45 | Mild support |
| 2 | Reminded you to take your Medicines? | 35 | 12 | 19 | 23 | 21 | 1.84 | Moderate Sup. |
| 3 | Picked up your DM medicines Prescriptions for you? | 25 | 25 | 23 | 17 | 20 | 1.83 | Moderate Sup. |
| 4 | helped you understand information about your medicines? | 37 | 26 | 20 | 16 | 11 | 1.43 | Mild support |
| 5 | Checked in with you about Your Medicines? | 36 | 26 | 23 | 12 | 13 | 1.45 | Mild support |
| 6 | Encouraged you take to your doctor about your medicines when you have question? | 18 | 24 | 23 | 22 | 23 | 2.07 | Moderate Sup. |
| 7 | Helped you to believe You can take your medicines as prescribed? | 26 | 24 | 22 | 18 | 20 | 1.83 | Moderate Sup. |
| 8 | Called you specifically to ask how you were doing with your diabetic medicines? | 67 | 21 | 10 | 9 | 3 | 0.72 | Poor support |
| Total mean score | | 1.58 | | | | | Mild Support | |

Cut point of table (4.3) = 0.8, Ass. = Assessment level, (0 - 0.8 = poor social support), (0.81 - 1.6 = mild support), (1,61 - 2.4 = moderate support), (2.41 - 3.2 = good support), (3.21 - 4 = high support).

DISCUSSION

The results of study presented the patient demographic characteristics showed in table (1). Regarding to mean age of the study sample was approximately 53,88 (50 - over) years old, half of the sample represents. More than half of the sample represents, (55.5 %) were females and the remaining were males. approximately two third of sample (67.3%) were married, and approximately half the sample (46.4%) have primary school graduation. Approximately, most of the sample (43.7%) have chronic diseases.

The result by Salman and Bakey. (2021), in Iraq, who reported that a cross-sectional study was conducted to assess Determination of the Level of Depression among Diabetic Patients at Al-Najaf Al-Ashraf Teaching Hospitals: The study comprised (120) patients, the mean age nearly thirds of the age of the study sample were between (50-59) years at an age mean of 53.43 ± 9.65 years, males were more than females, educational level, the study found a higher percentage of the study participants are do not read and write.

An explorative study was conducted Bonich (2019), in Canadian, Patient Assessment of Family Function, Glycaemic Control and Quality of Life in Adult Patients with T2DM and Incipient Complications, for 127 patients, (72.4%) males, mean age 65.23 (SD=10.26).

The result by Al-Sahouri et al. (2019), in Jordan, who reported that a cross-sectional study was conducted to assess Barriers to good glycaemic control levels and adherence to diabetes management plan in adults with T2DM: The study comprised (988) patients, the mean age of participants was (57) years, the high number of poorly controlled cases and the older age of participants, that female sexual dysfunction was higher in female patients with diabetes than females without diabetes.

The research by Tran et al. (2021), in Vietnam, confirmed that This descriptive cross-sectional study was used to assess Depression Among Patients with T2DM: Prevalence and Associated Factors. The study comprised (216) inpatients, the mean age of 64.73 (SD 13.68), 114 women (52.80%), Gender (78.9%) women, level education (78.6%) Secondary or less.

The result by Radzi et al. (2019), in Malaysia, who reported that a cross-sectional study was conducted to Depression and potential risk factors among the elderly with T2DM. A total of 511 patients participated in the study. The mean age of the respondents is 64.5 (Standard Deviation 7.0) years old. There were slightly more males (53.8%). Majority were Male (63.0%). married (76.9%) and Marital status, Married 393 (76.9%). Living arrangement, With spouse 163 (31.9%). level of Education, Secondary school 202 (39.5%). Occupation Retired 349 (68.3%). Chronic disease, No 286 (56.0%).

The research by Aminde (2019), in Came room, confirmed that This descriptive cross-sectional study was used to Assess Adherence to antidiabetic medication and factors associated with non-adherence among patients with type-2 diabetes mellitus in Cameroon. The study comprised (195) patients. the age 103 (52.8%). Gender, Female 136 (70.1%). Educational level, Primary 83 (42.8%). Chronic disease, Hypertension 63 (52.1%).

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 was conducted. Beverly (2021), Patient. To Assess The buffering effect of social support on diabetes distress and depressive symptoms in adults with T1DM and T2DM. For (325) patients. Social support subscale analyses showed tangible support.

The research by Presley et al. (2021), confirmed that This descriptive cross-sectional study was used to assess Social support and diabetes distress among adults with T2DM covered by Alabama Medicaid. The study comprised (1147) individuals participated, according to Adherence

to diabetic treatment. the result Low level of or satisfaction with social support.

A cross-sectional study was conducted by Al-Gnam (2020), in Australia to Assess the Medication adherence and predictive factors in patients with cardiovascular disease. For (120) patients. Patients with cardiovascular disease for whom social support was poor.

A cross-sectional study was conducted by Al Ganm (2019), in Australia and Iraq. A cross-sectional multicentre comparative study. To Assess Medication adherence and predictive factors in patients with cardio-vascular disease: A comparison study between Australia and Iraq. For (246) patients, The result poor social support in both Australia and Iraq.

CONCLUSIONS

The study concludes that the refill medication adherence for patients with type II diabetes depends on social support based on scientific basis, because of their direct effect in on direction.

ETHICAL CONSIDERATIONS COMPLIANCE WITH ETHICAL GUIDELINES

Written Consent was taken from the participants to obtain their permission to conduct the study, whether they agreed or refused to participate in the study. A participants were also informed that they could withdraw from the study at any time. Permission was taken from the college in No. 39 on 1/2/2023. Also, permission was obtained using the (MSSS-8) scale from the original researcher via e-mail.

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AUTHOR'S CONTRIBUTIONS

All authors contributed: study concept, writing the original draft, data collection, data analysis, and reviewing the final edition.

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