Assessment of diabetes type 2 clients' self- care skills toward Blood glucose level control

تقييم المهارات الذاتية لمرضى السكري النوع الثاني نحو السيطرة على مستوى السكرفي الدم

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الخلاصة

الهدف: تهدف الدراسة إلى تقييم مهارات العناية الذاتية لمرضى السكري النوع الثاني المتعلقة بالسيطرة على نسبة السكر بالدم ومعرفة العلاقة بين بعض المتغيرات(العمر،الجنس ،المستوى التعليمي،الدخل الشهري،و مدة الاصابه بالسكري) مع مهارات العناية الذاتية لمرضى السكري النوع الثاني المتعلقة بالسيطرة على نسبة السكر بالدم .

ألمنهجيه: دراسة وصفية أجريت l من خلال الاختبارات ألحاليه للفترة من الثاني حزيران 2011ولغاية الثاني من تشرين الثاني 2011لكي ينجز أهداف الدراسة ألحاليه .تم اختيار عينة غرضيه غير الاحتمالية (200) مريض 118 رجل و82 أمراه من الذين يراجعون مركز السكري في مدينة الناصرية جمعت البيانات باستخدام آلاتِ الدراسة وتوظيفَ المقابلةِ المحدّدةِ كمجموعة بياناتِ عملية. جمع البياناتَ أدّيتْ من الثاني من حزيران 2011الى الثاني من أب 2011ا.الاستبانه مصممة من قبل الباحث لقياس المتغيرات .الاستبانه مكونه من جزئيين ،الجزء الأول يتضمن المعلومات الديموغرافية والجزء الثاني يتكون من مهارات العناية الذاتية لمرضى السكري النوع الثاني المتعلقة بالسيطرة على نسبة السكر بالدم..تم تحديد الثبات للاستبانه من خلال الدراسة الاستطلاعية وحددت مصداقيتها من 15 خبير .تم تحليل البيانات من خلال استخدام الإحصاء الوصفي الذي تضمن التكرارات والنسب المئوية والوسط الحسابي وكذلك استخدام الإحصاء ألاستبياني الذي شمل معامل الارتباط بيرسون والتجانس

النتائج: أظهرت الدراسة أن أعلى نسبه في عينة الدراسة (37.5) كانتْ بفئة عمريه (50-59) سنه، الوسط الحسابي للعمر (52±1 .7) سنه، الأغلبية منهم 72% بدون مهارات العناية الذاتية لمرضى السكري النوع الثاني المتعلقة بالسيطرة على نسبة السكر بالدم .ومعظمهم ذكور متزوجين ، ذات مستوى تعليمي منخفضُ، مدّةِ تشخيصَ السكري من مجموعة (1-5) سَنَوات ، ذات دخلُ شهريُ غير كافيُ ،عاطلُين عن العمل ، زائدين الوزن لديهم معلومات مِنْ الطبيبِ،و الأغلبية منهم شخصوا بالصُّدفَة عندما يَقِيسونَ مستوى السكر في الدم، هناك علاقة هامّة بين مهارات العناية الذاتية لمرضى السكري النوع الثاني المتعلقة بالسيطرة على نسبة السكر بالدم و(، العُمر ,المستوى التعليمي،و الدخل الشهري)، وليس هناك علاقة هامه مع المتغيرات الأخرى.

التوصيات: أوصىَ الباحثُ يَجِبُ أنْ يُشْملَ مرضى السكري حديثي التشخيص في البرنامج التعليمي ويزودون بالكُتَيبِ الذي يَتضمّنُ المعلومات المرضية , والعناية الذاتية لمرضى السكري النوع الثاني المتعلقة بالسيطرة على نسبة السكر بالدم، مدعومة بأشرطة فيديو لتقوية أداء مهاراتهم و الإشراف عليها من قبل الممرضة أثناء زيارتهم للمركز ، مع الفحص الدوري لسُكرِ الدمِّ وا لسيطرة عليه وعلى وزنِ أجسامهم ليتفادوا المضاعفات الثانوية لمرض السكري .

Abstract:

Objective: study aims to assess the diabetes type2 clients' self- care skills toward blood glucose level control, and find out the relationship between variables which are (Age, gender, educational level, duration of DM diagnosis, and monthly income) with diabetes type 2 clients ' self- care skills toward blood glucose level control

Methodology: Descriptive study was carried out through the present investigation from Jun 2nd\2011- November 2nd 2011 in order to achieve the objectives of the present study. A non probability (purposive) sample, (200) cases which consists of clients who were attending Al-Nasiriyha diabetic center. Including (118) males and (82) females . The data were collected by utilization of the study instruments and employment of scheduled interview as means data collection. The data collection process was performed from June 2nd / 2011 /September 2nd/ 2011. A questionnaire was designed constructed by the researcher to measure the variable .The questionnaire consisted of 2 parts which are demographical, and diabetics self-caret skills indicator toward blood glucose level control .The reliability of the questionnaire was determined through a pilot study and the validity through a panel of experts. The data were analyzed through the application of descriptive statistic frequency, percentage, and the application of inferential statistical procedures, which include Pearson correlation coefficient, and contingency coefficient.

Results: The study shows highest percent of the study samples (37.5) were (50-59) years old. with the mean age (52±7.1) years ,(72.o%) 0f them are without of diabetes type 2 self-care skills toward blood glucose level control, most of them were married male, With low educational level, group's duration of type 2 DM diagnosis was (1-5) years, insufficient monthly income, unemployed, overweight, they had information from their physician ,and diagnosed indecently. There are significant association between

diabetes type 2 clients' self-care skills toward blood glucose level control and (age, educational level, monthly income).And there were no significant association with another variable

Recommendations:

New diabetic patients should be engage in educational program by nurse& supply with booklet which include self- care skills toward blood glucose level control and supported by videotapes to enforce their practices , with the nurse supervision during visit them to the center , instructed to control their blood glucose level, and body weight to improve their self-care skills to avoid complications.

Keywords: **Assessment, diabetes type 2, clients, self -care skills, blood glucose level control.**

INTRODUCTION:

Diabetes Mellitus (DM) is a group of metabolic diseases characterized by hyperglycemia resulting from defects in insulin secretion, action, or both. The chronic hyperglycemia is associated with Long-term damage, dysfunction, and failure of various organs especially the eyes, kidneys, nerves, heart, and blood vessels, DM is a much talked about subject these days. It is thought to be one of growing diseases in the world to describe it, as an epidemic disease [(1)].It is requires kills with knowledge in using evidence-based advances in treatment and self-care skills [(2)]Self- care skills are Practices used in every day to maintain healthy, in patients with DM which allow them to operate independently at home, and help them to control blood glucose level, it helps clients to exposed to various skills that will be face the challenges in future, to restore, prevent, treat, delayed, and decrease complications [(3)].By glycemic control in patients with diabetes type2, these benefits have been demonstrated in multiple large trials & available. with self-care skills can minimize risk of complications through blood glucose level and lipids target which are significant of diabetes patients type 2 to improves and encouragement of patients' performance.[(4)]

Objectives of the Study are to:

1. To assess diabetes type 2 clients' self- care skills toward Blood glucose level control.
2. To find out the relationship between (age, gender, educational level, duration of DM diagnosis, and monthly income) in relationship to clients' self- care skills toward Blood glucose level control.

METHODOLOGY:

Descriptive study was carried out through the present investigation from June 2nd 2011to November 2nd2011 in order to achieve the objectives of the present study. An official permission was obtained from the ministry of planning \Central Council of Statistics for the acceptance of the questionnaire draft. Another approval is issued from the Ministry of Health\The study has been conducted on the diabetes type 2 clients who are attended Al Nasiriyha Diabetic and Endocrinology Center. A non probability purposive sample of 200 cases which including (118) males and (82) females. who were attending Al Nasiriyha Diabetic and Endocrinology Center. with the mean of age (19.5, ± 9.25) year. The results according to the following criteria:.

Inclusion Criteria:

1:Men and women who were diagnosed With diabetes type 2 .

2:Ages between 20 – 69 years old.

Exclusion Criteria:

3: Free from other systemic illnesses.

4: Free from psychiatric illnesses.

5: Duration of diabetes mellitus not less than one year.

6: Excluded pregnant women with diabetic during pregnancy.

A questionnaire was designed and constructed by the researcher to measure the study variables. Such a construction was employed through the review of literature and

related studies. The questionnaire consisted of two parts which are demographic and diabetic type2 clients' self- care skills toward blood glucose level control,

Part I:

Demographic information: (6 items) age, gender, marital status, educational level, occupation, income in month was calculated as Socio Economic Status Scale (SES).

Clinical information: (2 items) duration of diabetes, body mass index . The total (8 items), the next diabetes self care skills indicator , only domain was proceeded with a yes no question. If the answer was yes; more specific questions were asked. Response options for the 11 questions were: Yes=2 No=1.

Part II:

Self care skills indicator toward blood glucose level control consisted of (3) domains

Monitoring blood glucose level (3 items).

Hyperglycemia (5 items).

Hypoglycemia (6 items).

The questionnaire items were rated and scored and rated on a scale of close-ended responses Yes=2 No=1 , where the lowest score represents a deficit of diabetes self care skills while the highest score represents having diabetes self care skills, for the final analysis all points are summed up.

The maximum score is from (summation number of items X2)

The minimum point is from (summation number of item X1)

Maximum score to cut point = have diabetes life skills.

Minimum score to cut point = deficit diabetes life skills.

The body mass index (BMI) is calculated by dividing the weight in kilograms by the square of the height in meters.

BMI = Body weight in kilogram / Height in (meter) and determined according to (BMI) classifications.

$\leq$ 18.5 kg / m2 under weight

18.5 – 24.9 kg / m2 normal

25.0 – 29.9 kg / m2 over weight.

30.0 – 39.9 kg / m2 obese.

$\geq$ 40.0 kg / m2 morbid obese (Grodner, et al., 2000).

SES=121-150 High score. SES=90-120 Middle score. SES=89 and less low score (Kumare,et al.,2005).

The content validity for the earlier constructed instrument was determined through a panel of experts of investigate the content of the questionnaire for clarity and adequacy in order to achieve the objectives of the present study. A preliminary questionnaire was designed and presented to 15 experts for determination of its face validity, these experts were four faculty members from the College of Medicine of University of Thi Qar, eight faculty members from College of Nursing University of Baghdad, one faculty member from Baghdad Institute of Technical Education, one faculty member from Al Haboby General Hospital in Nasiriyha Health Director, and one faculty member from the College of Education University of Thi Qar.

The mean of experience for panel was (19.5, ± 9.25) years, and experts agreement was 91.2% on questionnaire by using spilt half method. The researcher divided the number of experts answer to seven odd, and seven even that represent X, Y and application of correlation coefficient to achieve agreement with the questionnaire, that was appropriately designed and constructed except for modifications which were recommended according to the understanding of clients which were put in practice,

Item 1, 2 omitted from special life skills concerned how could the clients identify the signs and symptoms of hyperglycemia and hypoglycemia. Recommendations about words printing mistakes to correct them. A purposive sample of 20 men and women with diabetes type 2 who attended Al Nasiriyha Diabetic and Endocrinology Center. The pilot study was conducted from Jun 3o th2011 to July 21 th 2011.

Test-retest reliability was determined through a computation of Pearson's correlation for scale coefficients for 23 items and domains was r = 0.85.

r =0.82 for special life skills concerning diabetes mellitus disease questionnaire.

The data were collected in two ways for the present study through the utilization of the study instruments and employment of a scheduled interview as a means for data collection. The data collection process was performed from July 30th 2011 to septemper 2nd2011.

Interviews by the use of the questionnaire took approximately arrange 15 to 20 minutes for each patient. The research measured height and weight for each patient and calculated BMI for classification. Analysis of the data was employed through the application of the following statistical data analysis approaches.

A: Descriptive statistical data analysis: including

- Frequency=(F)
- Percentage
- Mean
-SD

B: Inferential statistical data analysis:

RESULTS:

Table 1: Demographic characteristics of (200) diabetes type 2 clients 'self-care skills toward blood glucose level control.

Age	Frequency n=200	Percent100 %
20 – 29 years	18	9.0
30 – 39 years	24	12.0
40 – 49 years	38	19.0
50 – 59 years	75	37.5
60 – 69 years	45	22.5
Gender	Frequency	Percent %
Man	118	59.0
woman	82	41.0
Marital status.	Frequency	Percent %
Single	33	16.5
Married	144	72.0
Widowed	6	3.0
Divorce	17	8.5
Educational level.	Frequency	Percent %
1llitreate	79	39.5
Read and write	20	10.0
Primary school graduate	30	15.0
Intermediate school graduate	18	9.0
Secondary school graduate	20	10.0
High institute graduate.	18	9.0
College graduate and above	15	7.5
Duration of diabetes mellitus diagnosis.	Frequency	Percent %
1 – 5 years	88	44.0
6 – 10 years	62	31.0
11 years and above	50	25.0
Monthly income.	Frequency	Percent %
Sufficient	4	2.0
Barely sufficient	43	21.5
Insufficient	153	76.5
Occupation.	Frequency	Percent %
Employee	66	33.0
Unemployed	76	38.0
House wife	58	29.0
Body mass index (BMI).	Frequency	Percent %
Under weight (Less than < 18.5 kg/m^2	2	1.0
Normal weight (18.5 – 24.9) kg/m^2	61	30.5
Over weight (25.0 – 29.9) kg/m^2	99	49.5
Obese (30.0 – 39.9) kg/m^2	38	19.0

The distribution of the matched demographic characteristics out of this table indicates that the majority (37.5 %) of groups are(50 –59) years, (59.0%) are male, (72.0%) are married, (39.5%) of the groups do not read and write, (44.0 %) groups of duration of DMtype2 diagnosis at (1–5) years, (76.5%) are insufficient monthly income, (38.0%) are unemployed , (49.5%) of the group are overweight .

Table 2: Total of (200) diabetes type 2 clients' self-care skills toward blood glucose level control.

Clients count	Without self-care skills	With self-care skills	Total
Count	144	56	200
% of total	72.0%	28.0%	100.0%

This table indicates that (72.0%) of the study sample (144) clients are without diabetes type 2self-care skills, while (28.0%) of the study sample (56) clients are with diabetes type 2 self-care skills toward blood glucose level control.

Table (3): Mean of scores for items of (200) diabetes type 2clients' self-care skills toward blood glucose level control.

No.	Items	Yes 2	Percent %	No. 1	Percent %	M.S	severity
1 st	**Do you exam in blood glucose level**	94	47.0	106	53.0	1.47	L
1-	Do you exam in blood glucose regularly.	74	37.5	20	10.0	1.78	M
2-	Do you sterile the finger before injection	67	33.5	27	23.5	1.71	M
3-	Do you change the injection site before doing it.	73	36.5	21	10.5	1.77	M
	Total	**214**	**107.0**	**68**	**34.0**	**1.75**	**M**
2nd	**Special life skills concerned hyperglycemia control (n=200)**						
1-	Do you do to glucose level measurement when you feel hyperglycemia signs and symptoms.	64	32.0	136	68.0	1.32	L
2-	Do you do exercise to decrease the glucose level.	76	38.0	124	62.0	1.29	L
3-	Do you avoid driving the car when you have hyperglycemia.	83	41.5	117	58.5	1.41	L
4-	Do you measure the glucose level after two. hours from doing exercise in order to be sure of decreasing it.	63	31.5	137	68.5	1.31	L
5-	Do you take the oral anti diabetic pills half an hour before meal.	92	46.0	108	54.0	1.46	L
	Total	**378**	**189.0**	**622**	**311**	**1.37**	**L**
3 th	**Special life skills concerned hypoglycemia control ..(n=200)**						
1-	Do you take direct glucose orally by yourself.	72	36.0	128	64.0	1.36	L
2-	Do you take much fluid e.g. (water, juices).	137	68.5	63	31.5	1.68	M
3-	Do you carry some sweet (choclet) to take it directly.	141	70.5	59	29.5	1.70	M
4-	Do you avoid doing any work needs effort	118	59.0	82	41.0	1.59	M
5-	Do you avoid doing exercises.	91	45.5	109	54.5	1.45	L
6-	Do you take snake before bed time.	87	43.5	113	56.5	1.43	L
	Total	**646**	**323.0**	**554**	**277.0**	**1.53**	**M**
1st	**Blood glucose examination.**	**214**	**107.0**	**68**	**34.0**	**1.75**	**M**
2nd	**Hyperglycemia control.**	**378**	**189.0**	**622**	**311.0**	**1.37**	**L**
3 th	**Hypoglycemia control.**	**646**	**323.0**	**554**	**277.0**	**1.53**	**M**
	Total table No. 3.	**1238**	**619.0**	**1244**	**622.0**	**1.49**	**L**

*MS = Mean Score, L= Low mean score, M = Moderate mean score

This table represents that the 1st mean of scores of blood glucose examination ,are moderate for the items (1, 2, 3 and the total), while low mean of scores for domain

1st, domain **2nd** for hyperglycemia control are low for all the items, and the total), and domain **3th** for hypoglycemia control are moderate for the items (2, 3, 4, and the total) ;furthermore the remaining items are low mean of scores .

Table 4: The causes correlationship of the contingency coefficient and significant level responding with or without of (200) diabetes type 2clients 'self-care skills toward blood glucose level control with age.

Total diabetes life skills / Age		Without self-care skills	With self-care skills	Total	* C. C test	** P-value	CS
20 – 29 years.	F	11	7	18	0.233	0.022	S
	%	5.5	3.5	9.0			
30 – 39 years.	F	13	11	24			
	%	6.5	5.5	12.0			
40 – 49 years.	F	26	12	38			
	%	13.0	6.0	19.0			
50 – 59 years.	F	54	21	75			
	%	27.0	10.5	37.5			
60 – 69 years.	F	40	5	45			
	%	20.0	2.5	22.5			
Total	F	144	56	200			
	%	72.0%	28.0%	100.0%			
Contingency level = 0.978							

CC. = Contingency coefficient. S = significant (P – value < 0.05), CS = Comparative Significant.

This table indicates that (27.0%) of the study sample within age group (50–59) years old without diabetes type 2 clients' Self-care skills toward blood glucose level control. Furthermore, that there is a significant relationship between diabetes type 2 self-care skills with age.

Table 5: The causes correlation ships of the contingency coefficient and significant level responding with or without of (200) diabetes type 2 clients 'self-care skills toward blood glucose level control with educational level.

Total diabetes life skills / Educational level		Without self-care skills	With self-care skills	Total	* C. C Test	** P-value	C.S
Illiterate	F	69	10	79	0.445	0.000	S
	%	34.5	5.0	39.5			
Read and write	F	18	2	20			
	%	9.0	1.0	10.0			
Primary school graduate	F	24	6	30			
	%	12.0	3.0	15.0			
Intermediate school graduate	F	13	5	18			
	%	6.5	2.5	9.0			
Secondary School graduate	F	11	9	20			
	%	5.5	4.5	10.0			
High institute graduate	F	4	14	18			
	%	2.0	7.0	9.0			
College graduate and above	F	5	10	15			
	%	2.5	5.0	7.5			
Total	F	144	56	200			
	%	72.0	28.0	100.0			
Confidence level = 1.000							

CC. = Contingency coefficient. S = significant (P – value < 0.05), CS = Comparative Significant

This table indicates that (34.5%) of the study sample Illiterate without diabetes type 2 self- care skills toward blood glucose level control**,** further more there are a significant relationship between educational level with total diabetes type 2 clients 'self- care skills.

Table 6:The cases correlation ships of the contingency coefficient and significant level responding with or without of (200) diabetes type 2clients 'self-care skills toward blood glucose level control.

Total diabetes life skills / Monthly in Come		Without self-care skills	With self-care skills	Total	* C. C Test	** P- value	C.S
Sufficient	F	1	3	4	0.283	0.000	S
	%	0.5	1.5	2.0			
Barley sufficient	F	22	21	43			
	%	11.0	10.5	21.5			
Insufficient	F	121	32	153			
	%	60.5	16.0	76.5			
Total	F	144	56	200			
	%	72.0	28.0	100.0			
confidence level = 1.000							

CC. = Contingency coefficient. S = significant (P – value < 0.05), CS = Comparative Significant

This table indicates that (60.5%) of the study sample within insufficient monthly income without diabetes self-care skills toward blood glucose level control, furthermore there are a significant relationship between total diabetes type 2 clients 'self-care skills with monthly income.

DISCUSSION:

Throughout the course of the present study it has been noticed in the table (1) that the age range between (20–69) years and the majority 75 (37.5%) of the group are (50–59) years, the mean of age are ((52±7.1)) years. This finding is supported by Boon et al [5]. reported that the type 2 DM is principally a disease of the middle aged and elderly. In the UK, it affected (10%) of population over 65 years, and over (70 %) of all cases of DM occur after of 50 years .And similar to the result, obtained from study done by Al-Mansour [6] . stated that the mean age was higher at (52) years old among clients who attended the out-patient clinic in Al-Faiha hospital in Basrah in both sex.Related to gender the majority 118 (59.0%) of study sample are males and the remaining are females. It is similar to result of study done by Al-Mansour [6]. While the option views of the researcher the male & female have an equal chance to expose to diabetic disease. Concerning to marital status, the majority 144 (72.0%) of study sample were married, while the minority 6 (3%) were widowed. This finding is agree with study of Al-Suffar [7] .stated that the majority (83%) of the study sample are married. With regard to the level of education of type 2 diabetic client, it is demonstrated that most of them could not read & write and they a counted 79 (39.5%) for the study sample. This result was agree with results of study done by Musaiger & Al-Mannai [8]. Who's found that the educational level among Bahraini adults with type 2 DM did not read and write. Relative duration since DM diagnosing, the majority 88 (44%) of the study sample are in duration of (1–5) years, while the minority 50 (25%) are in duration (11) years and above, while the range between (1–11) years and above, the mean is (7.05). These results was supported results of study done by Akbar[9].stated that the mean of diabetes type 2 clients duration averaged (9.8) years. Regarding income most of the study sample 153 (76.5%) is insufficient and most of them 76 (38 %) are unemployed. This result is supported with study of Maxwell et al [10]. stated that more than (44%) of their study sample were retired and significantly associated with diabetes self-care skills. Related to BMI the majority 99 (49.5%) of the study sample are (25.0–29.9) kg / m2 they are overweight. This result is supported with results obtain from study done by Al-Mansour [6] .stated that type 2 DM is strongly associated with obesity, more than (80%) of adults are overweight or obese.

Table 2: Indicates that the majority 144 (72%) of the total of (200) diabetes type 2 clients are without DM self-care skills toward blood glucose level control and the minority (28%) are with self-care skills. This result disagree with study done by NCCDPHP[11].Reported that the percentage of patients who get recommended preventive services and DM self-care skills, were increased from (46% - 87%) for HbA1c test, from (19% - 43%) for eye exams, from (26% - 56%), for foot exam, from (36% - 88%) for follow-up and from BMI calculated increased from (59% - 73%).

Table 3: This analysis include 3 domains relative to domain 1st represent self-care skills toward blood glucose level control on scale of yes 2 and No 1 **.** In regard to domain(1) with 3 items toward examine BG level, that represent the mean of scores of BG examination are moderate in items (1, 2, 3) while low mean of scores on domain (1) Moderate mean of scores for item (1) with examine BG regularly. This finding agree with results of study done by Smeltzer et al [12].Stated that two years prospective clinical trial conducted from 1983–1993, demonstrated the importance of achieving BG control in the normal regular BG control dramatically reduced the development and progression of complications. This finding may be related to supply the diabetic patient with acuee check to check the level of sugar in their blood (The researcher).Moderate mean of

scores for item2 with sterile the finger before injection procedure. This finding agree with results of study done by ADA [4].reported that use an alcohol pad to clean finger on the area that patient going to prick. Furthermore Lewise, [13].stated that it is not necessary to clean the finger with alcohol, that it may interfere with results. Finger should be washed in warm water and dry before puncturing it . Moderate mean of scores for item (3). This results agree with results obtain from study done by Foundation Diabetes Association FDA [15].stated that the use blood from a finger tip rather than an alternate site, because that readings taken from alternate sites may not always be as accurate as reading from the finger tips. Moderate in regard to total BG examination. This finding agree with results of study done by AHC[14]. Stated that testing of BG level will help patient properly to manage their diabetes regularly testing well, tell patients and their physicians know when change should be mad, and if there with type 2 DM self-care skills toward BG monitoring.

In regard domain2nd represent the self-care skills concerning, hyperglycemia control with 5 items: Refers the mean of scores are Low on items (1, 2, 3, 4, 5 and the total of hyperglycemia control skills). Low mean of scores for item 1 with doing glucose level measurement when the patient feel hyperglycemia signs and symptoms. This result disagree with results obtain from study done by Mertige[15]. stated that most of diabetes patients have no symptoms until BG level approaches 250 mg/dl, this is an important point to make with clients who do not routinely monitor their BG level, that test may also be ordered to help diagnose when someone has symptoms of hyperglycemia such as increase thirst, urination, fatigue, and blurred vision. Low mean of scores for item (2) with doing exercise to decrease the BG level. This result disagree with results of study done by Boon et al [5]. reported that the patients must have knowledge and self-care skills of diabetes about time consuming in normal activity and exercise while maintaining good control to treat hyperglycemia, for diabetic patients, approximately 50% of new cases of type 2 diabetes can be controlled adequately by diet and exercise. Low mean of scores for item (3) with avoid driving the car when the patient have either hyperglycemia or hypoglycemia. This finding disagree with results of study done by Boon et al[5].stated that information should be provided about regulation and practical advice to check BG before driving, and 2 hourly during long journeys. Low mean of scores for item (4) with measure the BG level after 2 hours for doing exercise in order to be sure of decreasing it. This finding disagree with results of study done by WIN[16]. Reported that balanced information about diabetes self-care skills about following a healthy eating plan and get regular physical activity may help to lower BG level, that must be checked 2–hours after exercise. Low mean of scores in item(5)with take (OADs) half an hour before make and total self-care skills towared hyperglycemia control. This result disagree with results obtain from study done by AHC[14] stated that if the patient miss a meal, do not take a dose, or extra dose when increase eating. The (OADs) maybe used as mono therapy or in combination therapy to reduce post-pyramidal hyperglycemia and have to be taken half an hour before meal or with each meal. Low mean of scores in regard to domain3 th refers to diabetes self-care kills toward hypoglycemia control with (6) items. Relative to the mean of scores for domain 3th are moderate on item (2, 3, 4, and the total of hypoglycemia control skills) while the remaining are low on items (1,5,6) .Low mean of scores on item 1 with take direct glucose orally by yourself. This result disagree with results obtain from study done by NDIC [17] stated that if your BG goes too low below 70 mg/dl, the patients feel shaky, confused, and dizzy. They must be check their BG level, if they are eat 15 g of

oral carbohydrate food, water, soda, 3-4 glucose tablets, some of sugar directly by themselves with take much fluid (e.g. water, juices) .Moderate mean of scores on item (2,3) with do you take much fluid e.g. (water, juices, and carry some sweet (choclet) to take it's directly. This results agree with results obtain from study done by Jahasz et al [18] stated that keep something with you at all times to treat low blood sugar by the following, if the patients are able, check their BG level, and start treatment immediately, treat with 15g of carbohydrate, then 15 min until glucose is over 100 mg / dl that includes (3-4) glucose tables, 3 sugar cubes or 1 tablespoon honey or syrup, 4-7 small pieces of candy, 8 ounces low fat or skim milk, 4 ounce4 ounce regular soda, and 4 ounce 1/2 cup fruit juice), Then checked BG level. Moderate mean of scores on item (4) with avoid doing any work need effort. This finding agree with results obtain from study done by Jahasz et al [18] reported that when patients start feeling their BG level has dropped too low treat it right away, that must be stop their doing after that sit down to self-treated**.** Low mean of scores on items (5, 6) with avoid doing exercise and take snake at bed time to treat and prevent hypoglycemia. This results disagree with results obtain from study done by Juhasz et al[18]stated that some of the tips for preventing and treating hypoglycemia include remember snack at bed time of patients take diabetes medicine, add snack before exercising if BG level is below 100 mg/dl, and avoid exercise when their medicine is working at its peak. Moderate mean of scores in regard on total diabetes type 2 self-care skills toward hypoglycemia control. This finding agree with results of study done by Gryer[20].stated that mild-moderate symptomatic hypoglycemia are effectively self treated by ingestion of glucose tablets, sugar, carbohydrate, soft drink, candy, other snack or meal, snack at the bed time should preferable to treat hypoglycemia that is important self-care skills. Low mean of scores in regard table (3) concerning DM disease as general. This finding disagree with results obtain from study done by Jahasz et al [18] stated that several studies including united kingdom prospective diabetes study (UKPDS) with diabetes type 2 have shown significant prevention or delayed of long-term complications related to self-care skills towards hypoglycemia, as a result of tight control and monitor of blood sugar.

Table 4: Indicates that there is a significant relationship between age and diabetes type 2 self-care skills toward blood glucose level control (C.C = 0.233, C.L = 0.978) . This results agree with results of study done by Baquedano et a [20] stated that self-care skills ability in relation to age group, the following presented good self-care skills ability 25 (10%) between (50–59) years of age, while (0.4%) between (30–39) years of age.

Table 5:Indicates that there is a significant relationship between educational level and diabetes type 2self-care skills toward blood glucose level control (C.C = 0.455, C.L = 1.000) . The majority (34.5%) of the study sample are do not read and write without diabetes type 2 self care skills This results were similar to results of study done by Baquedano et al[20] indicated that there is a significant relationship between level of education and self-care skills toward blood glucose level control . Which mean that level of education effect of reduce practice of multiple self-care skills among less educational level patients (The researcher)

Table 6: Indicates that there is a significant relationship between monthly income and diabetes type 2 self-care skills toward blood glucose level control (C.C = 0.283 , C.L = 1.000) , furthermore indicates that (60.5%) of the study sample with insufficient monthly income without diabetes self-care skills . This results agree with results of study done by Arleen et al[21].stated that a high income is the highest complications

free rate. (54.1%) and lowest multiple complications (8.1%) three or more complications compared to those in the lowest socioeconomic status (SES) group (22 %) no complications, (26 %) three or more complications. And no significant association with another variable.

CONCLUSION :

This study shows highest percent of the study samples were (50-59) years old with the mean age (52±7.1) years ,(144) of them were without diabetes type 2 self-care skills toward blood glucose level control ,most of them were married male. With low educational level. With group's duration is (1-5) years. insufficient monthly income, unemployed, overweight, they had information from the physician, and diagnosed indecently There are significant association between diabetes type 2 clients' self-care skills toward blood glucose level control and (age, educational level, monthly income). And no significant with another variable.

RECOMMENDATION:

The researcher recommended that newly diagnosed diabetic patients should be engage in educational program & supply by booklet which include self-care skills toward blood glucose level control and supported by videotapes to enforce their practices with nurse supervision during visit them to the center to improve their self-care skills.

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