

Mother's knowledge toward their children with diabetes mellitus type 1 in Baghdad teaching hospitals

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Conocimiento de las madres sobre sus hijos con diabetes mellitus tipo 1 en los hospitales universitarios de Bagdad

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Abstract

A descriptive study analytical the design was carried out in Baghdad Teaching Hospitals for the period from the 27th of March 2021 to the 25th July 2021. The study aimed to assess mother's knowledge toward their children with diabetes mellitus type one who diagnosed and admitted to medical units of the above mentioned hospitals. Probability (purposive) sample of (100) mothers were selected from medical units and outpatient consultation clinics. The study instrument consisted of two great parts which were constructed for the purposes of the study. The first part related to socio-demographic data of the mothers', another part two related to mothers knowledge about of their follow up children with diabetes mellitus as well as, the mothers educational level need to be an improved with increasing the number of professionals mothers toward caring of children with type one of diabetes mellitus. children with diabetes mellitus type one which consisted (29) items. The collected data were by the using of constructed by questionnaires, the data analysis by using 2 statistical approached: a descriptive statistical analyzed frequency, percentages,

range of the score, inferential statistical and mean of scores analysis. The results of the study revealed that quarter of mother's ages were between (35-39) years old, (72%) of them were housewives, (30%) of them were primary school graduates, demonstrates the mean of scores of (29) items to assess mothers' knowledge concerning their children with diabetes mellitus, which was significant on (10) items, and was highly significant on (2) items, and not significant on (17) items. With regard to the total knowledge, the results indicated that knowledge of mothers were not significant (poor), with the regard to the total mean of scores which was (1.49). Moreover, the findings found significant association was determined between mother's knowledge and their level of education. Finally, this study recommend establishing on educational and training sessions program for mothers about diabetes mellitus type one disease is important for the mothers to increase their awareness toward providing care for their sick children.

Keywords: Mothers, Knowledge, Children, Diabetes mellitus.

Se llevó a cabo un estudio descriptivo y analítico en hospitales universitarios de Bagdad durante el período comprendido entre el 27 de marzo de 2021 y el 25 de julio de 2021. El estudio tuvo como objetivo evaluar el conocimiento de las madres hacia sus hijos con diabetes mellitus tipo 1 diagnosticados e ingresados en unidades médicas, de los hospitales antes mencionados. Se seleccionó una muestra probabilística (intencional) de (100) madres de unidades médicas y clínicas de consulta ambulatoria. El instrumento de estudio constó de dos grandes partes las cuales fueron construidas para los fines del estudio. La primera parte se relacionó con los datos sociodemográficos de las madres, la otra parte dos se relacionó con el conocimiento de las madres sobre sus hijos con diabetes mellitus en seguimiento, así como con el nivel educativo de las madres que debe mejorarse a medida que aumenta el número de madres profesionales. hacia el cuidado de niños con diabetes mellitus tipo uno. niños con diabetes mellitus tipo uno que estuvo conformado por (29) ítems. Los datos recopilados se realizaron mediante el uso de cuestionarios construidos, el análisis de los datos mediante el uso de 2 enfoques estadísticos: una estadística descriptiva analizada la frecuencia, los porcentajes, el rango de la puntuación, la estadística inferencial y el análisis de la media de las puntuaciones. Los resultados del estudio revelaron que una cuarta parte de las edades de las madres tenían entre (35-39) años, (72%) de ellas eran amas de casa, (30%) de ellas eran graduadas de escuela primaria, lo que demuestra la media de puntuaciones de (29) ítems para evaluar el conocimiento de las madres sobre sus hijos con diabetes mellitus, que fue significativo en (10) ítems, altamente significativo en (2) ítems y no significativo en (17) ítems. Con respecto al conocimiento total, los resultados indicaron que los conocimientos de las madres no fueron significativos (pobres), con respecto a la media total de puntuaciones que fue (1,49). Además, los hallazgos encontraron que se determinó una asociación significativa entre el conocimiento de la madre y su nivel de educación. Finalmente, este estudio recomienda establecer un programa de sesiones educativas y de capacitación para madres sobre la enfermedad de diabetes mellitus tipo 1, es importante para que las madres aumenten su conciencia sobre el cuidado de sus hijos enfermos.

Palabras clave: Madres, Conocimiento, Niños, Diabetes mellitus.

This type of diabetes mellitus is taken by the Greek word of diabetes, means of siphon-to pass through it and the Latin script word mellitus meaning of sweet. A reviewing the history show that the term of the diabetes was first used through Apollonius of Memphis. Egyptian, Ancient Greek and Indian, civilizations discovered that sweets natural of urine in this conditions, and hence the propagations of the word of diabetes mellitus came up into being. The discovered the roles of the pancreas in the pathogenesis of the diabetes¹.

The best of the hormone insulin by the pancreas leading to the availability of an effectiveness treating for diabetes. The Over years, exceptional of work has taken site, and multiple discovered as well as administration strategy, have been formed to tackle this problem. Unfortunately, the even today, the diabetes is is one of the most common a chronic diseases in the developing countries and worldwide. In the United States it aresidue as the seventh leading of death. This condition of diabetes mellitus is a metabolic disorder, involving inappropriate increased of blood glucose levels. The diabetes has several of categories, that include of type gestational diabetes, neonatal diabetes².

The type one of diabetes in children, is a condition that required lifelong of treatment. The type one of diabetes mellitus occur when the human being who has autoimmune system raid and destroy of cells in the pancreas that is called beta cells, which produce insulin in the body to keep blood sugar at normal levels by, enter glucose into the cells to give them energy³.

Diabetes mellitus is a chronic (long-term) of health conditions that affect how your body turn outfood into energy and power. Maximum of the nutrition you eat is broke down into glucose (also called sugar) and released into your bloodstream. When your blood sugar goes up, it signals your pancreas to release insulin. The insulin acts as a key to let the blood glucose into your body cells for used as energy⁴.

Type one of diabetes mellitus intellect to be caused by an autoimmune reaction the body attack itself through misconception that stop your body of insulin making. Approximately 5-10% of the peoples who have diabetes condition have a type one. The more features of type 1 diabetes oftentimes developed as quickly. It's usually diagnostic in children's, ten and young adult. If you have type one diabetes, you'll needs to taken of insulin every day to survives. Currently unavailable, no one knows how to prevention type 1 of diabetes⁵.

This type of diabetes has become of the largest portion of the public health problems to date. By decrease

a physical activities, over nutrition, and nutrition's transition caused by change in lifestyle contributed to the rising incidence rate of chronic metabolic disorders as well as deaths concerning to themes. The shifting from under nutrition's to over nutrition indicated that a chronic diseases of overflow have becomes a public health problems; hence proved, sustainable development health-related to goals have been develops of the preventions of this diseases⁶.

There is a significantly variability in incidences based on geography and ethnicity. For example, the incidences in Finland is sixty per hundred thousand person-years, while in China it is 0.1 per hundred thousand . In the US, there are approximately twenty to thirty percent new diagnosis per hundred thousand person per years. These incidences have increased by two hundred to three hundred percent in the past several decades. In the United States, there are now more than 1.25 million peoples a living with type 1 diabetes, and around five hundred are children⁷.

There are environmental factors affecting and the gut micro-biota influences metabolism in the body human being. The major studies have confirmed that lifestyle interventions can effectively prevent the progressions of diabetes conditions in individuals with impaired glucose tolerances. If the window of prevention is shifted earlier, diabetes may become a fortuitous evenst. Effective prevention needs high attention from the government and the participant of all subject. Concreted scientifically and reasonable measurement also needs to be developed by proficient and scholars⁸.

Objectives: The current study aimed at assessing the Knowledge of Mother's relatesd to the diabetes type one and to find out association between Mother's knowledge with certain variables such as, age, visits, school enrolled, types of diabetes, child hospitals duration, source of information, injection site and mothers educational level.

A descriptive study design analytical was conducted with out in Baghdad Teaching Hospitals for the period from 27th of March 2021 to the 25th July 2021. The study aimed to assess mother's knowledge toward their children with diabetes mellitus type one who diagnosed and admitted to medical units of the above mentioned hospitals. Probability (purposive) sample of (100) mothers were selected from medical units and outpatient consultation clinics . The study instrument consisted with two majority of parts which were construct for the purposes of the study. The first part related to mothers' socio-demographic data, the second part related to mothers knowledge about their children with diabetes mellitus type one which consisted of (29) items. The data out of collected through the using of constructed questionnaire. Select the stability of the questionnaire during and select the pilot study through a group of thirteen expert. : The data of the research out of analyze through the use of statistical package of (SPSS) version 20.

Table 1: Distribution of Studied Sample by their Socio-demographic Characteristics and Their Children Demographic Data.

No	Socio-demographic Characteristics	Total sample n=100 (n=100)		Cumulative Percent	
		F	(%)		
1.	Mother's age (year)				
	20-24	16	16	16	
	25-29	19	19	35	
	30-34	20	20	55	
	35-39	25	25	80	
	40- and more	20	20	100	
	Total	100	100.0		
2.					
	Mother's job				
	Housewife	72	72	72	
	Employee	21	21	93	
	Retired	7	7	100	
	Total	100	100.0		
	3.	Mother's educational level			
		Not read and write	12	12	12
		Primary school graduate	30	30	42
		Intermediate school graduate	22	22	64
		Secondary school graduate	11	11	75
Institute or college graduate		10	10	85	
College graduate and more		15	15	100	
Total	100	100.0			
4.	Marital status				
	Married	93	93	93	
	Other	7	7	100	
Total	100	100.0			
5.	Residential area				
	Urban	87	87	87	
	Rural	13	13	100	
Total	100	100.0			
6.	Number of children in the family	F	(%)	Cumulative Percent	
	1-2	34	34	34	
	3-4	40	40	74	
	5- and more	26	26	100	
	Total	100	100.0		
7.	Home ownership				
	Own	61	61	61	
	Rent	24	24	85	
	Shared	15	15	100	
Total	100	100.0			
8.	Mother information source				
	Medical team	55	55	55	
	Magazines	10	10	65	
	The television	35	35	100	
Total	100	100.0			
9.	Baby gender				
	Male	48	48	48	
	Female	52	52	100	
Total	100	100.0			
10.	Sequence of baby in the family				
	The first	26	26	26	
	The second	33	33	59	
	The third	20	20	79	
	Fourth and more	21	21	100	
Total	100	100.0			
11.	Age of the child with diabetes				
	Less than one year	5	5	5	
	1-5 year	15	15	20	
	6-10 year	38	38	58	
	11-15 year	42	42	100	
Total	100	100.0			

Table 2: Assessment of Mother's Knowledge Concerning Their Children with Diabetes Mellitus.

No	Standard items: N= 100	Know	Uncertain	Do not know	M S	Severity
		F	F	F		
1.	Diabetes type 1 is caused by little or no secretion of insulin in the body	72	11	17	2.55	H.S
2.	Too little or no insulin results in high blood sugar	46	12	41	2.03	S
3.	Diabetes mellitus, type 1, among disease that can be controlled	35	5	60	1.75	S
4.	Diabetes mellitus type 1, should be controlled by insulin, food and physical activity	9	11	80	1.29	N.S
5.	Mixed insulin is mixing of two types of insulin in glaucoma (clear and mixed)	13	8	79	1.34	N.S
6.	The insulin vial is used for one month only when stored at room temperature (outside the refrigerator)	8	7	85	1.23	N.S
7.	Cold insulin causes local irritation after glaucoma	31	4	65	1.66	S
8.	The occurrence of any change in the color of insulin or the formation of granules in it	7	3	90	1.07	N.S
9.	The occurrence of any change in the color of insulin or the formation of granules in it indicates that it has become ineffective	29	3	68	1.61	S
10.	The insulin dose is taken approximately half an hour before food	30	5	65	1.65	S
11.	Unused insulin is stored in the refrigerator at a temperature of 2-8C (that is, it must be stored in a cool place).	30	3	67	1.63	S
12.	The pure insulin is short acting, while the melanogenic insulin is longer _acting.	7	3	90	1.17	N.S
13.	The pure inulin is mixed with the fading agent. The net insulin is withdrawn first, and then the insulin is mixed.	9	6	85	1.24	N.S
14.	The process of lifting the skin before glaucoma to avoid the risk of muscle glaucoma	6	3	91	1.15	N.S
15.	It is preferable to insert the needle vertically when insulin glaucoma.	73	13	14	2.59	H.S
16.	It is preferable to insert the needle when glaucoma insulin in an oblique way in the sites that contain a thin layer in the skin	11	6	83	1.28	N.S
17.	Change insulin glaucoma areas daily	28	4	68	1.60	S
18.	The distance from the glaucoma of the first and second dose to the glaucoma area is about 3 cm, or about two fingers	11	3	86	1.25	N.S
19.	Continuing insulin glaucoma in one area lead to subcutaneous atrophy or fibrosis	26	4	70	1.56	S
20.	Small swelling under the skin after insulin glaucoma means that the needle has blue in the correct way	35	6	59	1.76	S
21.	Insulin injection, as it is for individual user and not shared with another person to avoid the transmission of disease	12	4	84	1.28	N.S
22.	An insulin injection is used several times (for a week, for example) if it is kept clean	10	9	81	1.29	N.S
23.	Failure to maintain the cleanliness and storage of the insulin injection, it use leads to infection of the skin and area of glaucoma	8	4	88	1.20	N.S
24.	There are other methods of administrating insulin other than the traditional method of glaucoma	12	11	77	1.35	N.S
25.	The need to wash hands before preparing an insulin dose	12	9	79	1.33	N.S
26.	You withdraw the insulin dose slowly and gently while turning the bottle down.	30	6	64	1.66	S
27.	The needle is with draw from the skin quickly and the skin is returned to its original position	9	3	88	1.21	N.S
28.	Press the place of glaucoma gently with a piece of cotton without wiping it hard	8	2	90	1.18	N.S
29.	Clean the area of glaucoma with a cotton ball and alcohol	12	2	86	1.26	N.S
	Total Knowledge	632	168	2100	1.49	N.S

Table (3): Association between Mother's Knowledge and their Level of Education.

Level of education		Know.	Uncertain	Do not know.	Total
Not read and write	F	58	12	278	348
	%	16.7	3.4	79.9	100%
Primary school graduate	F	196	50	624	870
	%	22.5	5.8	71.7	100%
Intermediate school graduate	F	131	32	475	638
	%	20.5	5	74.5	100%
Secondary school graduate	F	66	15	238	319
	%	20.7	4.7	74.6	100%
Institute graduate	F	70	24	196	290
	%	24.1	8.3	67.6	100%
College and more graduate	F	111	35	289	435
	%	25.5	8	66.5	100%
Total	F	632	168	2100	2900
	%	21.8	5.8	72.4	100%
X ² obs= 26.476		df= 10	X ² crit= 18.307	P< 0.05	

Discussion

The sample of the study included (100) mothers. At regard to table 1 revealed the demographic characteristic of the studied sample, they were in age group of (35-39) years old, and the result agreed with (Kadhaer, 2016) in his study "Assessment of Nurse's Knowledge toward Children with Guillian-barre Syndrome at pediatric, (72%) of them were housewives, (30%) of them were primary school graduate, while (93%) of mothers were married⁹.

Regarding to the residential area, (87%) of mothers were from urban area. Concerning to the number of children in the family, (40%) of them had between (3-4) children. With regard to housing, (61%) of families have own a house, while (24%) of them are renter. Finally, and concerning to the age of the child with diabetes (42%) of children their ages were between (11-15) years old. This results disagree with (Al-sultani, 2011) in his study "Evaluation of Nurses' Practices toward Coronary artery Bypass Grafting Patient in the Intensive Care Units in Baghdad City"¹⁰.

Table 2 demonstrates the mean of scores of (29) items to assess mothers' knowledge concerning their children with diabetes mellitus, which was significant on (10) items had been the insulin dose is taken approximately half an hour before food, and the result agreed with (Nosaiba, 2021) mention that the majority had good knowledge on the diabetic treating that include as insulin administrations, its storage condition, and also the effects of exercises on blood sugar. However, almost there 18.8% of study participation did not know hypoglycemia features, and about 11% of these patients were unaware of hypoglycemia treatment¹¹, and was

highly significant on (2) items had been too little or no insulin results in high blood sugar, and not significant on (17) items to changes insulin glaucoma areas daily, the study found out less than half of mothers have fair toward mothers knowledge with diabetes mellitus. With regard to the total knowledge the result indicated that the knowledge of mothers was not significant (poor), this results disagreed with (Susan et al.,2017) mention that the mothers' of children with diabetes mellitus are quite skill in reading their children's behavior cues. Mothers' concerns included the fear of hypoglycemia and epileptic activity and fit, access to dailycare center, and baby-sitting services competent of care for their children conditions. This responses significant differed from the controlling group mothers'¹², with respected to the total mean of scores which was (1.49). While Kozier and others (2014) study the important of mother knowledge around child with burn injuries which found that the a flow sheets enable to care quick and concisely and provided of child's with diabetes mellitus¹³.

Table 3 determined the significantly associated between mothers' knowledge and their levels of educations. Ammenwerth (2013) mentioned that the parents document is consider to be an importance part of the clinical documentation and information about pediatric diseases a precondition for good patient care; for efficient communication and for cooperation within the health professional team¹⁴. Regarding the Association between mothers level of education with their knowledge toward their children with diabetes mellitus type one, the present study indicates that there is significant association between mothers level of education and their' knowledge. This good knowledge among mothers may be due to their educational status which help them to provide better care to their sick children. There is no guidance or global program or standard to supports their practical and help them to improved of them and their mothers knowledge provide to the children with diabetes type one.

Recommendations

The study recommended establishing an education and training session program for mothers about diabetes mellitus type one disease is important for the mothers to increase their awareness toward providing care for their sick children. Emphasis on follow up children with diabetes mellitus as well as, the mothers educational level need to be improvement with increase or arise the numbers of professional mothers toward caring of children with type one of diabetes mellitus

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