

Original Research Article

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Study on Nutritional Nurses Knowledge Regarding Diabetes in Basra City Center Hospitals

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ABSTRACT

Nurses play an important and critical role in educating the individual with diabetes. Aim of the study is to assess the knowledge level of nurses and associated factors in the nutritional management of diabetes with sample of 100 nurses in Basra hospitals; Closed – end questions questionnaire was used for the purpose of data collection. The results showed that nurses knowledge that concerning fatty food are about diabetes patient should not exclude any nutrient from their diet over (70%) said diabetes patients not could exclude any of the major nutrients from their meals while (20%) of them indicated that carbohydrates, proteins and fats respectively should be excluded from the meals. A large proportion of the nurses (95%) could recognize that diabetes and obesity are closely related and found (99%) of them could recognize exercise plays important role in the prevention and management of diabetes. Also found a large proportion of the nurses over (40%) could recognize that diabetes is not caused by high sugar intake, and over (30%) of nurses did not know the cholesterol should be restricted to (300) mg daily for diabetes patients. Also showed in this study over (40%) of the nurses unable to identify there recommended daily caloric intake from carbohydrates for diabetes patients. And over (40%) of the nurses could not correctly identify recommended fasting plasma glucose level for diabetes. The recent study also showed that level of education was (35%) for BSC, on other hand female (65%) were more than male. Even though the differences were not significant we found that higher knowledge scores were associated with nurses nursing Bachelors degree and those having worked for (5) years or lower.

Keywords

Nutrition, Diabetes

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Introduction

Nurses play an important and critical role in educating the individual with diabetes. Their role has become more pertinent in these recent times of the rising prevalence of diabetes (especially type 2) in every country.

Reports showed that 382 million people have diabetes and will rise to 592 million by the

year 2035). It reports that 80% of People with diabetes live in low- and middle-income countries.

An estimated 522, 600 people in Sub-Saharan Africa died from diabetes-Related causes in 2013 (Aguiree *et al.*, 2013). With a clinical feature of high blood Glucose, the major goal of diabetes treatment and management is to maintain normal or near normal blood glucose

levels (Carney, 2010) in affected individuals it has been shown that maintaining normal or near Normal blood glucose levels in people with diabetes reduces complications (Nelms, Sucher *et al.*, 2010). Diabetes care is largely self-care requiring the active participation of the patient. In decision making, goal setting and daily management processes (Sukhpal and Indarjit, 2007). Effective self-management care is provided by a multidisciplinary team of healthcare professionals including nurses, dieticians, Pharmacists, physicians, and diabetes educators. An important component of the self-management care is nutrition. Patients are usually educated on basic meal planning, carbohydrate counting and exchanges as well as how to read food labels with the goal of making them independent (Bantle *et al.*, 2008). Although nutrition education is the responsibility of dieticians and/or nutritionist, nurses have an important role to play.

Patients are more likely to trust them and seek for advice from them regarding the treatment and management of their condition. A study from the US and Australia have reported that 90% of nurses routinely receive request for nutrition advice from patients the best of care (Lindseth, 1990). Nurses must be adequately knowledgeable about nutrition therapy for diabetes patients (Scheiderich *et al.*, 1983; Evert *et al.*, 2013) in order to provide effective advice.

Materials and Methods

This study was across-sectional and multicenter involving (100) nurses regarding diabetes of three hospitals nurses in Basrah city center. To achieve the aim of the study, questionnaire was designed and translated to Arabic language, and it divided in to Main parts, the first part was to identify the socio-demographic characteristics and Second part was to identify the nutritional nurses

knowledge regarding the Diabetes. The project carried out in the Basrah hospitals. The study started from tenth October (2017) to one first April (2018). Statistical data analysis include-percentage, frequency and mean of score by SPSS (Statistical package for social sciences) program for find the outcome.

Results and Discussion

Although nutrition education for diabetes patients is the responsibility of dieticians and nutritionist, nurses played an important role. In this study the knowledge levels of nurses and associated factors in the nutritional management of diabetes were measured.

The recent study female and the higher knowledge percentage were associated with nurses having Bachelor's degree (53%). And those having worked for (5) years or lower (71%). showed that the groups that have been the distribution of questioners where (35%) working in other sites, (30%) working in Internal medicine, (25%) working in Surgery and (10%) working in Neurology. Furthermore nurses who took one nutrition courses and work in the other sites (77 %). Nursing programmers with regards to nutrition could help improve the nutrition knowledge of nurses during training. These findings also indicate that making refresher courses available to nurses may help improve their knowledge in the nutritional management of diabetes (Victor *et al.*, 2015; Warber *et al.*, 2000).

Showed significant nursing knowledge that concerning fatty food about diabetes, patient should not exclude any nutrient from their diet more evidently, about (10%) of the nurses did not know that it is important for diabetes patients to eat balanced diets as (20%) of them indicated that carbohydrates, protein and fats respectively should be excluded from the meals of diabetes patient.

Also the study showed that nurses knowledge on the average amount of the calories expected from carbohydrates to be of the weakest. Over (30%) of them indicated that they did not have an idea at all as to the daily macronutrient requirements of diabetes patients while over (10%) wrong options.

Furthermore, over (20%) of the nurses did not know that the total amount of carbohydrates consumed per meal is generally more

important than the type of carbohydrate consumed with over (40%) of the nurses ever providing dietary advice to diabetic patients, these findings makes one to worry about the quality of advice provided to the diabetes patients. nurses in the dietary management of fats may pose risks to the adherence of the diabetes patients to dietary recommendations, Victor *et al.*, (2015) found in their study a poor knowledge on nutritional management of diabetes (Table 1–5).

Table (1) Frequency and percentage of gender

Gender	Group	frequency	percentage
	male	35	35%
	female	65	65%
	Total	100	100%

Table (2) Frequency and percentage of educational level

Educational level	Categories grouping	Frequency	Percentage
	Secondary nursing school	26	26
	Medical institute (Diplomate)	26	26
	Nursing college (Bachelor)	53	53
	High study(M.Sc. & Ph.D.	1	1

Table(3) shoed year of experience

Experience Years	Categories/groupings	Frequency	Percent (%)
	5 - 1	71	71%
	10 - 6	9	9%
	15 - 11	9	9%
	20 - 16	11	11%

Table (4) Nursing knowledge concerning fatty food

Questionnaires	Agree %	Disagree %	Don't know %	MS	SN
Non-fat or low fat milk contains less fat and low calories than whole milk	86	7	7	2.79	S
Trans-fats increases LDL cholesterol levels	64	16	20	2.44	S
Animal fat should be restricted for diabetes patients	68	17	15	2.72	S
cholesterol should be restricted to 300 mg daily for diabetes patient	42	20	38	2.04	S
Diabetes and obesity are closely related	95	4	1	2.94	S
Reducing Calories has importance to diabetic patients	78	11	11	2.67	S
Animal fat should be restricted in diabetic patients	81	8	11	2.7	S

Table (5) Nursing knowledge concerning carbohydrates

Questioners	Agree	Disagree	Don't know	MS	SN
Diabetes patients should not exclude any nutrient from their diet	19	79	2	2.17	S
Use total carbohydrates on food labels to determine amount of carbohydrates per serving	75	12	13	2.62	S
The total amount of carbohydrates is more important than the type of carbohydrate	46	34	20	2.26	S
50–60% of the daily caloric intake of diabetics should come from carbohydrates	45	19	36	2.09	S
10–15% of the daily caloric intake of diabetics should come from protein	40	18	42	1.98	NS
Starch food such as bread and rice should be restricted in diabetic patients	84	14	2	2.82	S

Another important finding of this study was that over (60%) of nurses were able to correctly identify the appropriate initial treatment for hypoglycemia. This is higher than the (6.5%) reported by Drass *et al.*, (1989) consistent with the (62.9%) reported by (Carney *et al.*, 2010) but lower than the (73%) reported by Ahmed *et al.*, (Ahmed *et al.*, 2012).

In this study as over (10%) of the nurses said they will recommend either a piece of cake with icing, 1 cup of milk or a slice of bread for the initial treatment of hypoglycemia, over (10%) did not know what to do with a patient experiencing hypoglycemia

Nurses' knowledge in this regard requires improvement probably through refresher

courses. Coexistence of high cholesterol and LDL levels in diabetes patients puts them at a higher risk of developing the metabolic syndrome. As such advising diabetes patients to reduce their intake of fat especially animal fat is very important.

However, the nurses' knowledge in this regard was found poor (6 %). Even though over (80%) of the nurses were able to correctly identify that non-fat or low fat milk was lower in fat and calories than whole milk, while (20%) of them did not know that trans-fats increases plasma LDL cholesterol levels. In furtherance, over (20%) did not know that animal fat should be restricted for diabetes patients. Also, over (40%) did not know the recommended daily intake of cholesterol for diabetes patients is the lack of knowledge among the nurses (Schaller and James, 2005).

The study conclude that nurses should be give nutritional courses about the adequacy of nurses knowledge in the nutritional management and the quality of dietary information provided to patients.

References

- Aguiree, F, Brown, A., *et al.*, (2013). IDF diabetes atlas. Ahmed, A., Jabbar, A., *et al.*, (2012). Diabetes related knowledge among nurses: A multicenter Study in Karachi, Pakistan. *BMC Endocrin attitudes and nutrient intakes of nurses working in Kyungnam area. The Korean Journal of Endocrinology*, 26(1), 1-10.
- Ahmed, A., Jabbar, A., *et al.*, (2012). Diabetes related knowledge among residents and nurses: A multicenter study in Karachi, Pakistan. *BMC Endocrine Disorders*, 12 (1), 18.
- Bantle JP, Wylie-Rosett J, Albright AL, Apovian CM, Clark NG, Franz MJ, Hoogwerf BJ, Lichtenstein AH, Mayer-Davis E, Mooradian AD, Wheeler ML. (2008) Nutrition recommendations and interventions for diabetes: a position statement of the American Diabetes Association. *Diabetes Care*. 31 Suppl 1:S61-78.
- Carney, T. A. (2010). Knowledge, comfort level and the perceived role of nurses in promoting nutritional management of diabetes. Drexel University.
- Drass, J. A., Muir-Nash, J., *et al.*, (1989). Perceived and actual level of knowledge of diabetes mellitus among nurses. *Diabetes Care*, 12 (5), 351-356.
- Evert AB, Boucher JL, Cypress M, Dunbar SA, Franz MJ, Mayer-Davis EJ, Neumiller JJ, Nwankwo R, Verdi CL, Urbanski P, Yancy WS (2013). Nutrition therapy recommendations for the management of adults with diabetes. *Jr., American Diabetes Association Diabetes Care*; 36 (11):3821-42
- Lindseth, G. (1990). Evaluating rural nurses for preparation in implementing *J Rural Health*. 1990 Jul; 6 (3):231-45.
- Nelm, M., Sucher, K., *et al.*, (2010). Nutrition therapy and pathophysiology. Cengage Learning. Nutrition interventions. *The Journal of Rural Health*, 6 (3), (231-245).
- Schaller, C., and James, E. L. (2005). The nutritional knowledge of Australian nurses. *Nurse Education Today*, 25 (5), 405-4412.
- Scheiderich SD, Freibaum CN, Peterson LM (1983) Registered nurses' knowledge about diabetes mellitus. *Diabetes Care*; 6 (1):57-61
- Sukhpal K. and Indarjit W (2007). Knowledge of diabetes mellitus amongst nursing students Effect of an intervention Nursing and Midwifery. *Research Journal, Vol-3, No. 1*.
- Victor Mogre, Gloeri A., Dedorah N., and Helene (2015) assessing nurses Knowledge level in the nutritional management. *International Journal Africa nursing sciences 3. pp: 40-43*

Warber, J.I., Warber, J.P., Simone, K.A.,
(2000.) Assessment of general nutrition
knowledge of nurse practitioners in

New England. J. Am. Diet. Assoc. 100
(3), (368– 370.)

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