



Evaluation of Patient Compliance, Knowledge, and Health Services among Diabetic Patients Admitted in the Internal Department of Kamal Odwan Hospital

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Abstract

Diabetes mellitus is a chronic disorder characterized by hyperglycemia and the late development of vascular and neuropathic complications. Diabetes is best managed by multidisciplinary care team and overlapping skills: physician, specialist diabetes nurse, dietitian, and chiropodist. The aim of this study is to evaluate patient knowledge and compliance with treatment of diabetes. The study conducted in Kamal Odwan Hospital in Gaza between designed prospective studies in which all patients that are admitted to the internal medical department and diagnosed with diabetes alone or associated with other diseases were included in this study. The patients were filled questionnaire regarding their age, history of the disease and other variables. the data analyzed manually and the results is shown below. The results that patient education and knowledge is very poor and the patients visit the physicians only to take their medications without any follow up as measurement of blood glucose level or other investigations. Only 20% of patient knows about the disease and only 20% were educated by specialist I primary health care or physician. So we recommend increase the role of health education in primary health care and other centers to reduce the complications of diabetes.

Keywords: Diabetes, education, insulin, patient

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Introduction

Diabetes mellitus (DM) is a chronic disorder characterized by hyperglycemia and the late development of vascular and neuropathic complications. Regardless of its cause, the disease is associated with a common hormonal defect namely, insulin deficiency that may be absolute or relative in the context of coexisting insulin resistance [1,2]. DM comprise two types, type one is caused by an autoimmune, predominantly T-cell-mediated process that selectively destroys the pancreatic β cells results in complete deficiency of insulin and treated by insulin replacement by therapy. Genetic factors explain 30 to 40% of total susceptibility [3]. Type two previously referred to as 'non-insulin-dependent' or 'maturity-onset' is a heterogeneous condition characterize by partial insulin release and treat by oral hypoglycemic drugs alone or with insulin [1,4-7]. Diabetes is best managed by multidisciplinary care with the combined efforts of a well-trained primary care team and a team of specialists with complementary and overlapping skills: physician, specialist diabetes nurse, dietitian, and chiropodist [5,8]. The program of treatment consist of pharmacological and non pharmacological treatment. The pharmacological treatment is based on drug therapy with parenteral insulin and its analogs and oral therapy with variety of groups such as sulfonylurea, biguanids, thiazolidindiones and dipeptidylpeptidase inhibitors. In some cases mixed therapy with parenteral insulin and oral hypoglycemic drugs are used [1,2]. The non pharmacological treatment is very important in conjunction with the pharmacological treatment. The non pharmacological treatment is based on patient education with the key elements including (1) causes of hyperglycaemia and diabetic symptoms; (2) own treatment—diet and lifestyle, drawing up and injecting insulin, oral agents, recognizing and treating hypoglycaemia (3) self-monitoring technique—targets and danger levels, how to respond to poor control; (4) 'sick-day' rules—monitoring during inter current illness, how to adjust own treatment; when and how to call for help[8,9,10]. Patients with type 1 or type 2 DM should receive education about nutrition, exercise, care of diabetes during illness, and medications to lower the plasma glucose. Along with improved compliance, patient education allows individuals with DM to assume greater responsibility for their care [10-12]. Patient education should be viewed as a continuing process with regular visits for reinforcement. It should not be a process that is completed after one or two visits to a nurse educator or nutritionist. The diabetes educator is a health care professional (nurse, dietician, or pharmacist) with specialized patient education skills who is certified in diabetes education [13-16].

Material and Method

The study conducted in Kamal Odwan Hospital in Gaza between 1/2/2013–15/5/2013 designed prospective study in which all patients who are admitted to the internal medical department and diagnosed with diabetes alone or associated with other diseases were included in this study. The inclusion criteria (mentioned above) and evidence of laboratory and clinical examination, all patients must be inpatient. Any other patients do not obey this criteria will be excluded. The patients were filled questionnaire regarding their age, history of the disease and other variables. Face to face interview were done to fill the questionnaire. The data were collected tabulated and analyzed manually.

Results

The total number of patients was 110 patients who are in the internal department and follow the inclusion criteria. All of the patients were diabetics as mentioned above. The data was tabulated and analyzed manually and these are the results:

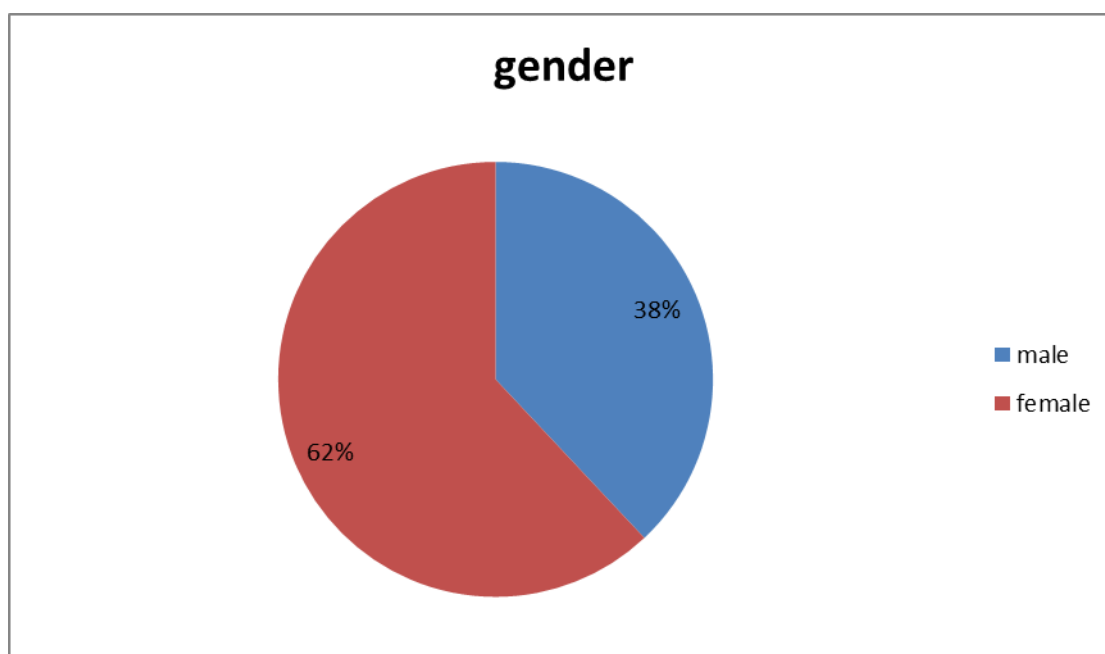
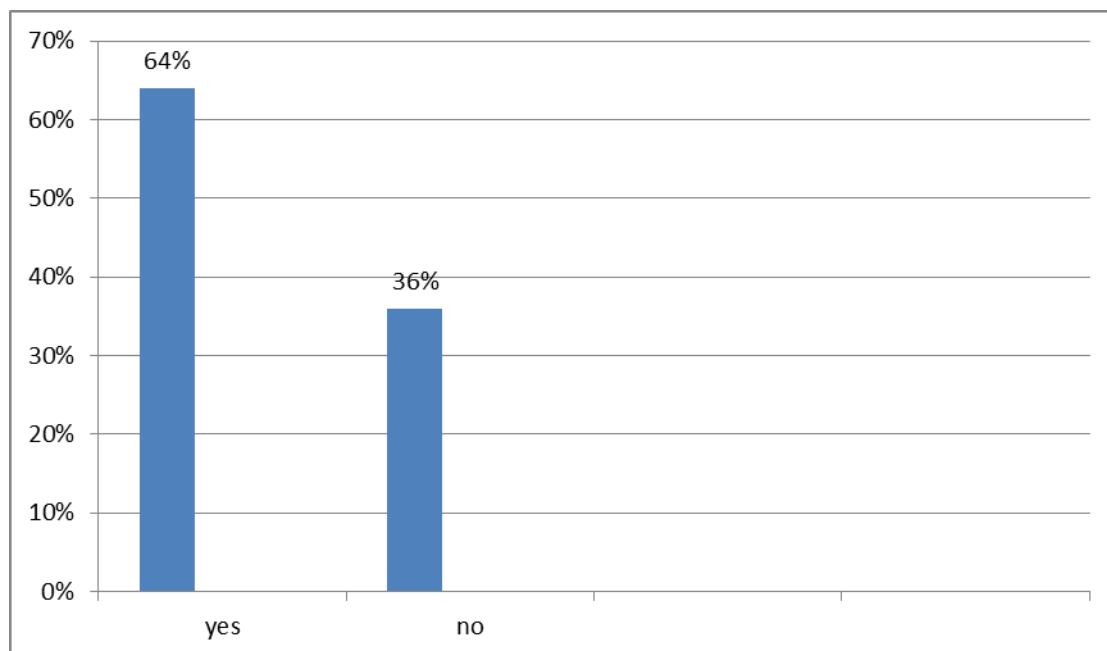


Figure 1. Represent the gender distribution among diabetics

Table 1. Represent the percent of patients with good compliance and take their medications regularly.

Treatment compliance	yes	no
	24%	76%

**Figure 2.** Represent the percent of patients who follow up in the outclinic or in special clinic

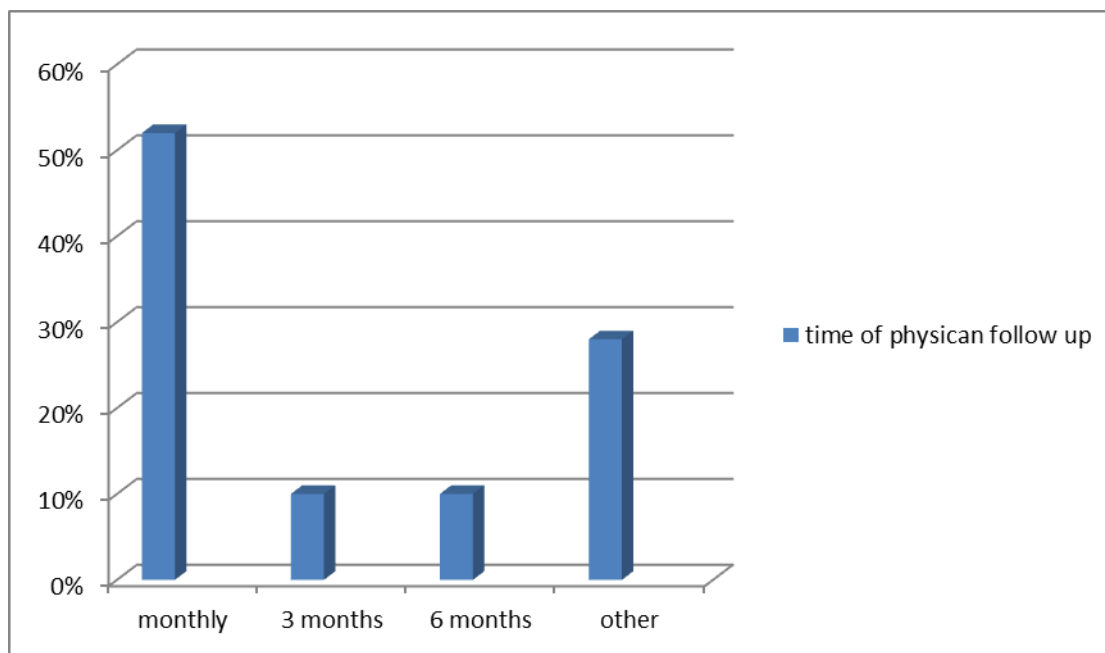


Figure 3. Represent the time between each follow in the outclinic or in special clinic

Table 2. Represent the percent of patients perform blood glucose measurement

Blood glucose measurment	yes	no
	20%	80%

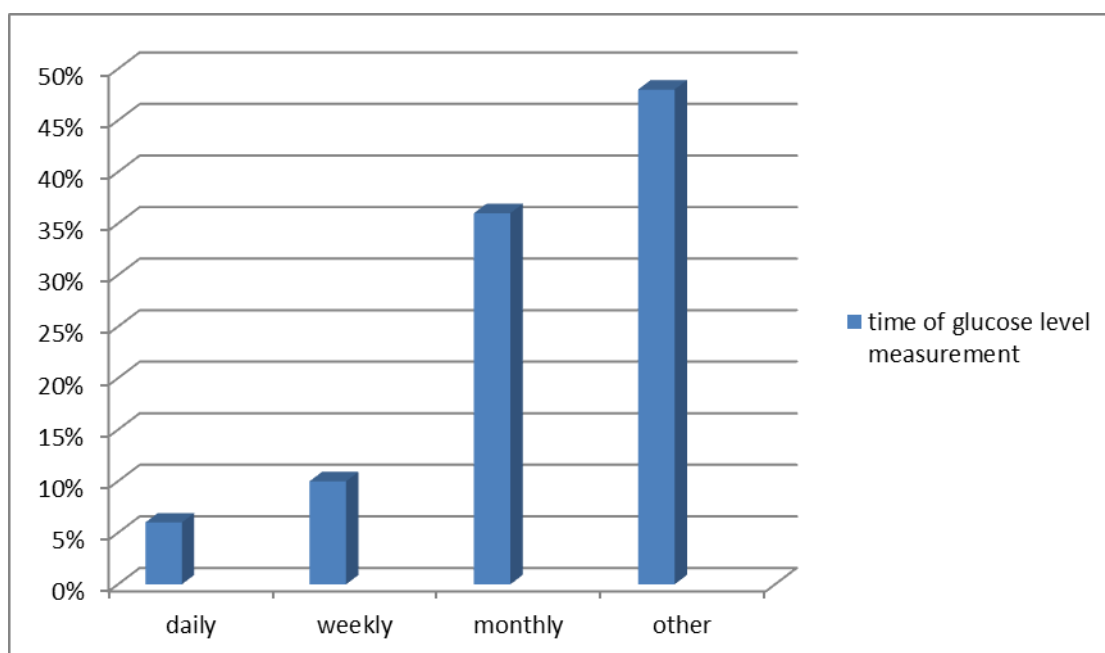
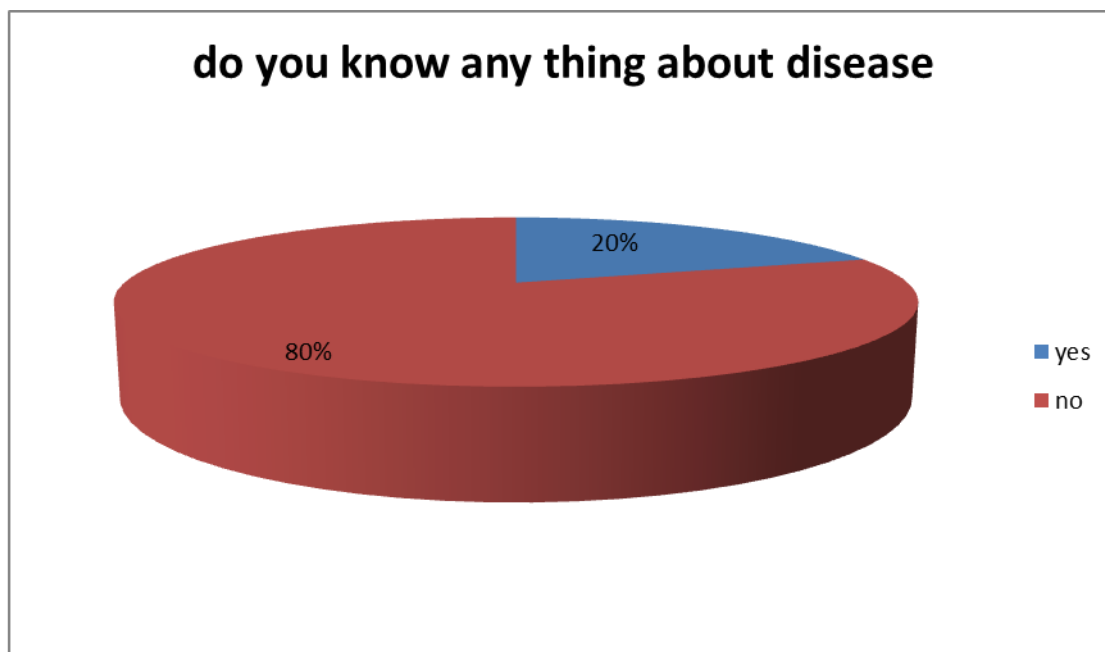


Figure 4. Represent the time between blood glucose measurement

Table 3. Represent the percent of patients with daily foot care

Daily foot care	yes	no
	20%	80%

**Figure 5.** Represent the percent of patient's knowledge about diabetes

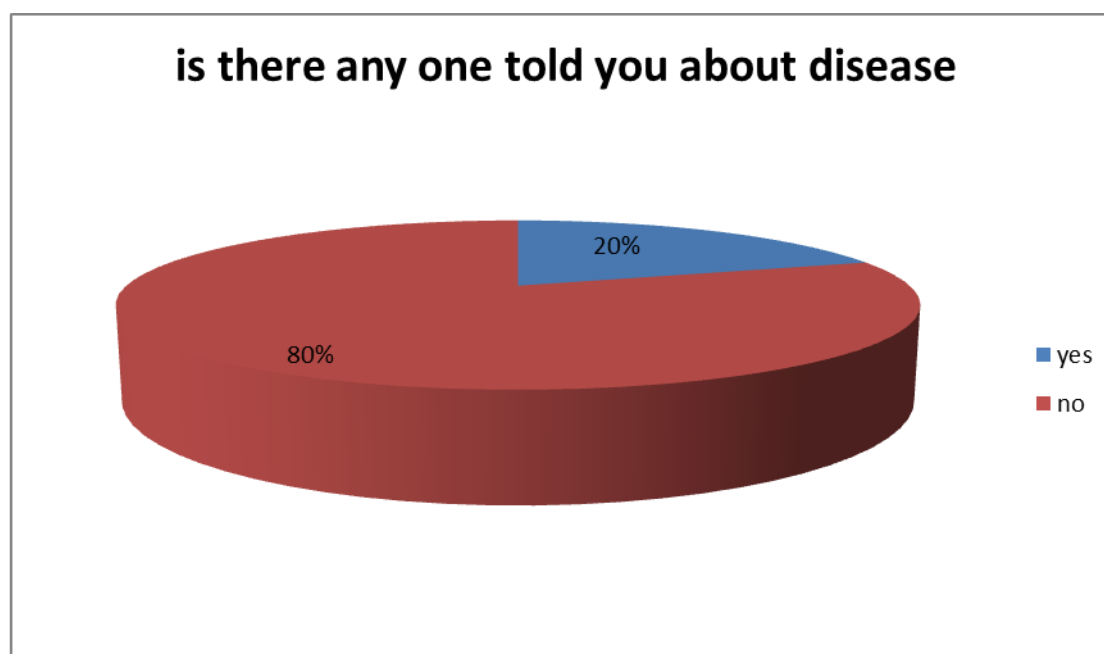


Figure 6. Represent the percent of patients educated about diabetes from any clinic

Discussion

Diabetes mellitus (DM) is a chronic disorder characterized by hyperglycemia and the late development of vascular and neuropathic complications. As mentioned above the treatment of diabetic patients is aimed to improve the quality of life and reduce the complications. This must be performed under the supervision of team of specialist including patient education as a corner stone. Patient education is the most important and main stay of treatment. In this study the researcher tried to focus attention about patient education and compliance.

It is clear that there is 36% males and 64 % females, this may be due smoking and overweight and stress among males more predominant than females in Gaza Strip which are risk factors for DM. The data reveal that 76% take their medication regularly and 24% are not compliant with their medications and this increases the complications of disease. Figure (2) show that 64% of the patients visit the physician regularly and 36% are not, this mean the patient compliance is good. In fact this is not truth during the interview the researcher concluded that the patients visit the physicians only to take their medications monthly through prescription in the primary health care or hospitals or other centers without any follow up as measurement of

blood glucose level or other investigations. This was confirmed by figure (3) which show that only 52% in different times (9% each three months, 9% each six months and 28 are not regular). Table (2) show that 80% measure their blood glucose level and 20% do not do at all. Of those who perform blood glucose level only 5% perform daily and 8% perform weekly and 83% perform each month or more. According to documentation diabetic patient must measure blood glucose level twice weekly at least and this is another proof that patient knowledge about diabetes is very poor and the patients only visit clinic to receive medication. Regarding foot care the data shows only 46% only take care about their foot which explains the high incidence of diabetic foot disease and amputation among diabetic patients in Gaza strip. Also for those perform daily foot care they do not do it in the right way. The last two figures show that only 20% of patient knows about the disease and only 20% were educated by specialist in primary health care or physician or other societies. This may explain the poor outcome and prognosis among diabetic patients including amputations, leg ulcer, micro and macro vascular and other complications. And this is another proof that patient education among diabetics in Gaza Strip is very poor.

Conclusion and Recommendation

The results and discussion confirm that patient knowledge and compliance about diabetes is very poor also the services provided for patients is poor also, so we recommend;

- 1-Increase the role of health education in primary health care and other centers to reduce the complications of diabetes (one day weekly).
- 2-Construction of society that care with diabetic patients and provide them with new updates about the disease and how to interfere with the disease, foot care and other issues.
- 3-Encourage the team management for diabetic patients, this increases the quality of life and reduce the complication of the disease.
- 4-Introduce computerized program for pt follow up and control only in one clinic, this prevent the complication result from to poly pharmacy due to multi center follow up for each patient.

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