



## Assess the Knowledge Regarding Self-Care Management among Newly Diagnosed Type 2 Diabetic Clients Attended Out Patient Department at Parshuram Hospital, Ghanekhunt-Lote, Ratnagiri Dist. Maharashtra State

Authors

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### Abstract

**Background of the study:** *Diabetes mellitus is a major public health concern worldwide. There will be an alarming increase in the population with type 2 diabetes in developed and developing countries over the next two decades. The global prevalence of DM was estimated to increase from 4% in 1995 to 5.4% by the year 2025. In 2011, 366 million people (8.3%) worldwide were affected by DM. Numbers are expected to rise to 552 million (9.9 %) for DM by 2030.*

### Objectives of the study:

1. To assess the level of knowledge regarding self-care among diabetic patients.
2. To find out the association between level of knowledge regarding self-care management among diabetic patients and selected variables.

### Hypothesis

*The hypothesis will be tested at 0.05 level of significance.*

*H<sub>1</sub>: There will be significant association between the levels of knowledge scores of diabetic patients on self-care management with the selected demographic variables.*

**Methodology:** *A quantitative approach was used. Descriptive research design was used for the study. The study variables were knowledge of self-care management among newly diagnosed type 2 diabetic client was independent variable and Socio-demographic variables such as family history, education, source of information, past illness, previous hospitalization. The study was conducted in a Maharashtra Education Society, Parshuram Hospital and Research Centre Ghanekhunt Lote. It is a 100 bedded hospital. On an average 100-120 diabetic patients are attended to the hospital per month. The sample for this study is Diabetic clients. The sample size for the current study consists of 30 patients with Diabetes mellitus. Purposive sampling technique will be used to the select the sample. The tool consists of a self-administered questionnaire. It is divided into two parts. Part I consist of 5 items regarding demographic variables and Part II structured knowledge questionnaires to assess the knowledge regarding self-care management among newly diagnosed type 2 diabetes mellitus. The data was analyzed in terms of objectives of the study using descriptive statistic and inferential statistics.*

### Findings of the study

**Demographic Variables:** *The most of the client 20(66.67%) had Family History and 10(33.33%) have no family history of Diabetes mellitus. Based on education, most of Diabetic clients 11(36.67%) were higher secondary, 08 (26.67%) were Graduates, 06 (20%) were Secondary, and 05(16.66%) were Primary education. In relation to source of information, 11(36.66%) of respondents got information from T.V. and*

books, 05(16.66%) from other sources, and 03(10%) from newspaper. With regard to the past illness 24(80%) of respondents has no past illness, and 06(20%) having past illness. In relation to 21(70%) were not previously hospitalized, and 09(30%) were previously hospitalized.

The knowledge level of the clients, 14 (46.67%) client had Good knowledge, 16(53.33%) client had Average knowledge. And none of the client had poor knowledge. The knowledge score of diabetic clients was maximum score was 15, ranged from 07-15, mean was 10.83, SD was 2.43, Median 10, and the mean percentage of knowledge was 72.2%. There was significant association between Family History 4.13,  $df=1$ ,  $P>0.05$  and previous hospitalization 5.71,  $df=1$ ,  $P>0.05$  with the knowledge of self-care management. Hence there was significant association between Family history, previous hospitalization with knowledge of self-care management of newly diagnosed diabetic clients.

**Conclusion:** The study concludes that the diabetic clients have average knowledge regarding the self care management of diabetes. Hence there is need for educational activities for the diabetic patients regarding self care.

## Introduction

### Prevention is better than cure.

Diabetes mellitus is a major public health concern worldwide. There will be an alarming increase in the population with type 2 diabetes in developed and developing countries over the next two decades. The global prevalence of DM was estimated to increase from 4% in 1995 to 5.4% by the year 2025. In 2011, 366 million people (8.3%) worldwide were affected by DM. Numbers are expected to rise to 552 million (9.9 %) for DM by 2030<sup>1</sup>.

Complications of Diabetes mellitus are physiologically harmful. DM is condition that if it is uncontrolled, it can produce lifelong complications affecting different organs of body; diabetes mellitus is an important cause of morbidity and mortality all over the world. Because of lack of awareness, most patients with DM suffer from its complications<sup>2</sup>.

Diabetes Mellitus defines a group of metabolic disorders characterized by hyperglycemia resulting from defects in insulin secretion, insulin action, or both. It is one of the most common metabolic syndromes, since there are 200 million diabetic individuals in the world; this creates a need to understand the etiology of disease and the factors influencing its onset. Diabetes is a long term disease with the variable clinical manifestation and progression. The chronic hyperglycemia from whatever causes leads to number of complication like cardiovascular, renal, neurological, ocular, and other infection<sup>3</sup>.

Diabetes mellitus is a group of metabolic disorder arising either due to relative or absolute deficiency of a digestive hormone called insulin or inability or resistance of body cells to use the available insulin. Diabetes mellitus is a silent disease and is now recognized as one of the fastest growing threats to public health in almost all countries of the world. Every 5<sup>th</sup> person who suffers from diabetes in the world today is an Indian<sup>4</sup>.

Patients with Diabetes mellitus cannot be cured, but they can control it with regular exercise, diet, and drug. Regular and proper administration of drug can provide desired outcome, control diabetes, and prevent its complications. Undiagnosed or inadequately treated diabetes mellitus patients develop multiple complications leading to hospital admission. Diabetes mellitus in children adolescents and old people can be controlled by, effective teaching and awareness programme about foot care, exercise, diet, its complications early detection and prevention. Patients with diabetes mellitus cannot be cured, but they can control it with regular exercise, diet and drug. Regular and proper administration of drug can provide desired outcome, control diabetes and prevent its complications, undiagnosed or inadequately treated diabetes mellitus patients develop multiple complications leading to hospital admission. Diabetes mellitus in adolescents and old people can be controlled by effective teaching and awareness program about foot care, exercise, diet, its complications, early detection and prevention<sup>5</sup>.

### Need for the Study

Diabetes is an ice berg disease. One of the biggest challenges for health care providers today is addressing the continued needs and demand of individuals with chronic illnesses like diabetes. The importance of regular follow up of diabetic patients with the health care provider is a great significance in averting any long term complications. Studies have reported that strict metabolic control can delay or prevent the progression of complications associated with diabetes. The needs of diabetic patients are not only limited to adequate glucose control but also correspond with preventing complications, disability limitations and rehabilitation<sup>5</sup>.

Diabetes can affect nearly every organ in the body. Diabetes related complications are coronary artery disease, peripheral vascular disease, stroke, neuropathy, dental ailments, gangrene, retinopathy, and nephropathy and skin disease<sup>3</sup>.

People with diabetic are 2 times more likely to develop blindness, 17 times more likely to develop kidney disease, 30 -40 times more likely to undergo amputation ,2-4 times more likely to suffer a stroke than non-diabetics ,Women with diabetic are at 7 times more likely to have heart disease. Heart disease is more diffused in diabetics who are also more prone to silent attacks as they experience no pain associated with an attack because of diabetic neuropathy .This possible complications make diabetics dreaded disease<sup>3</sup>.

Diabetes mellitus is a chronic disease with which the patient must live his life. To achieve a state of health and acceptable level of function, patient with diabetes mellitus needs to have adequate knowledge and attitude of self- care activities. They need to clear their doubts related to self-care activities such as diet, exercise, medication, foot care and follow up. To lead an independent life the individual diabetes should be a controller of his own life<sup>6</sup>.

A cross sectional study was conducted on self-care practice and its predictors among adults with diabetes mellitus on follow up at Nekemte

hospital at west Ethiopia. A structured interview by four trained nurses and a total of 260 diabetic patients were selected using random sampling technique. Interviewed and study showed that 45% respondents had poor diabetes self-care practice and 53.4% of them had diabetic related knowledge were interviewed. Finally study showed that nearly half of diabetic patients had poor self-care practices and an educational status was associated with self-care<sup>7</sup>.

A cross sectional study was conducted in Iran University of medical sciences to determine the knowledge and practice of foot care in people with type -2 diabetes. A knowledge questionnaire was administered to 148 patients with type -2 diabetes and their knowledge score was calculated which revealed that their knowledge score of foot care was 6.6 (SD t/3.0) which was considered as moderate knowledge. The study findings showed inadequate knowledge on foot care and the necessity to teach the patients regarding foot care<sup>8</sup>.

### Objectives

#### Problem Statement

A study to assess the knowledge regarding self-care management among newly diagnosed type 2 diabetic clients attended Out Patient Department at Parshuram hospital, Ghanekhunt-Lote.

#### Objectives

1. To assess the level of knowledge regarding self-care among diabetic patients.
2. To find out the association between level of knowledge regarding self-care management among diabetic patients and selected variables.

#### Hypothesis

The hypothesis will be tested at 0.05 level of significance.

**H 1:** There will be significant association between the levels of knowledge scores of diabetic patients on self-care management with the selected demographic variables.

## Operational Definitions

### 1. Self-care

In this study the care refers to the caring of oneself regarding medication, exercise, diet, personal hygiene, prevention of complication and wound care.

### 2. Knowledge

In this study knowledge refers to correct responses obtained from diabetic patients regarding self-care as measured by a structured knowledge questionnaire.

### 3. Diabetic patients

In this diabetic patient refers to the client whose fasting blood glucose is more than 120 mg/dl and is on treatment for diabetes mellitus.

## Review of Literature

### Literature Related To Knowledge and Attitude

1. A study was conducted a cross sectional sampling 52 Chinese with diabetes type 2 were studied through the structured interview schedule based in validated sales assessing diabetes knowledge compliance behaviors, and demographic data. The findings indicate that there was no association between what patients taught and they were actually doing. Most of the patients were aware of factual knowledge in diabetes but were unaware on the application of knowledge to their real life situation. Strategies are suggested to close the knowledge action gap and increase patient's motivation and comply with health regimen<sup>9</sup>.

2. A study was conducted to assess the effect of adult self-regulation of diabetes on quality on life out come, in Columbia. The study findings indicated that individuals' level of understanding of diabetes and their perceptions of control over diabetes were the most significant predictors of outcomes. However diabetes specific health behaviors were related to an increased sense of burden that was negatively associated with quality of life<sup>10</sup>.

3. The study conducted to determined and compares the knowledge, belief and practice of diabetes receiving free medical care and those paid for medical care in Tamilnadu, India. A

questionnaire was administered to elicit diabetic patients' knowledge regarding diet, exercise, adverse effects, habits and other matters. Their belief above diabetes and there practice regarding diet, medication and self-monitoring. The results showed a large gap between knowledge and action in both groups and need for increased efforts towards patients education regarding diabetic mellitus<sup>11</sup>.

4. A study conducted to examine the relationship between specific family support and other psychological factors with regard to diet and exercise self-care among older Mexican American with type 2 diseases. 138 adult age 55 years and older who are type 2 diabetes completed a survey to access family support specific to diabetes, barriers to self-management, self-efficiency and diabetes self-care activities. The study result shows that, higher level of perceived family support and greater self-efficiency were associated with higher reports levels of diet and exercise self-care. The researcher concluded that, family behavior is associated diet and exercise self-care<sup>12</sup>.

5. A descriptive study of 100 type 2 diabetic patients' knowledge and attitude on self-care activities were accessed by using interview schedule and Likert's scale. The result shows that 48%at the patients had inadequate knowledge, 35% of the patients had moderately adequate knowledge and 17% of patients had adequate knowledge. Regarding attitude, 72% of patients had undesirable attitude, 16% patients had desirable attitude and 12%of patients had most desirable attitude on self-care activities. The researcher concluded that, most of the patients were inadequate knowledge and attitude about diabetes mellitus. So proper health education can improve the patients' knowledge and attitude on self-care activities<sup>13</sup>.

### Literature Related to Diet

6. A study was conducted to determine whether an increased dietary protein to carbohydrate ratio as an effect, independent of energy restriction, on weight loss and insulin resistance. A clinical

intervention study of 12 weeks of energy restriction and 4 weeks of energy balance comparing 2 groups of obese, hyper insulinemic subjects (14 males and 43 females), randomly assigned to either a high protein diet or standard protein diet. Data were analyzed by 2 ways ANOVA. After 16 weeks the decrease in weight, total fat and abdominal fat was similar in the high protein and standard diet. At both baseline and week 16, the plasma glucose response was significantly less and insulin responses similar following high protein compared to the standard protein meal, plasma triglyceride level decreased more in the high protein compared to the standard protein diet (10%). The researcher concluded that, in obese subjects with hyperinsulinemia (i) energy restriction is the major determinant of weight loss and, (ii) an increase in the protein to carbohydrate ratio is associated with lower postprandial glucose and decreased plasma triglyceride concentrations<sup>14</sup>.

7. A study was conducted to compare a simple meal plan emphasizing healthy food choices with a traditional exchange based meal plan in reducing HbA<sub>1c</sub> levels in urban African Americans with type 2 diabetes. A total 648 type 2 diabetic patients were randomized to receive instructions in either a healthy food choices meal plan (HFC) or a exchange based meal plan to compare the impact on glycemic control weight loss, serum lipids and blood pressure at 6 months of follow up. The study results showed that improvements in glycemic control over 6 months were significant but similar in both groups. Improvement in HDL cholesterol and triglyceride were comparable in both groups, whereas other lipids and blood pressures were not altered. The researchers concluded that, medical nutrition therapy is effective in urban African American with type 2 diabetes<sup>15</sup>.

8. The study was conducted to compare the effect of simple dietary education on food intake, nutritional components and glycemic control with conventional dietary education. A randomly allocated 30 new elderly diabetic outpatients and

38 outpatients who had been visiting the clinic for long time to the simple education group and the conventional educating group. Before and 2 or 3 months after simple or conventional education, they assessed food intake nutritional components for a week. The study results showed that, in the new diabetic patients, simple conventional nutritional education similarly reduced HbA<sub>1c</sub> levels as well as intakes of total energy, sweets and fruits after the education. However, patients who had been visiting for a long time had no significant differences in total energy intake and HbA<sub>1c</sub> level between before and after education in both the simple and conventional groups. The results suggest that simple dietary education is useful and effective for elderly diabetic patients on their first visit<sup>16</sup>.

9. The study was conducted to determine if registered dietitians (RD) and registered nurse (RN) certified diabetes educators provide similar recommendations regarding carbohydrates and dietary supplements to individuals with diabetes. The service sample consisted of 336 certified diabetes educators: 207 were RNs and 159 were RDs. The study results showed that, no statistically significant differences were found between RNs and RDs in typical carbohydrate recommendation for treatment of diabetes. However RDs were more likely than RNs to recommend consuming carbohydrate sources with protein to treat hypoglycemia. They concluded that, although some difference existed, RDs and RNs are making similar overall recommendations in the treatment of individuals with diabetes<sup>17</sup>.

10. A study was conducted to assess the effectiveness of weight loss more quickly with low carbohydrate diets compared with usual dieting obese, were taken for a study purpose. For a first 7 days, patients at their usual diet. For next 14 days they followed a low carbohydrate diet. The study results showed that patients lost 1.65 kg after 14 days on a low carbohydrate diet. Blood sugar and cholesterol level improved during the low carbohydrate diet. The researchers suggest

that, reduced calorie intake seems to account for weight loss associated during the 2 weeks at low carbohydrate level<sup>18</sup>.

#### **Literature Related to Exercise**

11. 8 week pilot study conducted to evaluate the short-term benefits of an Internet based supplement to visual care that focused on providing support for sedentary patients with type 2 diabetes to increase their physical activity level. A total 78 type 2 diabetic patients were randomized to the diabetic network. The results showed that, there was a substantial variability in both site use and outcomes with in the intervention and control conditions. Internal analyses revealed that among intervention participations, those who used the site more regularly derived significantly greater benefits, where as those in the control condition derived no similar benefits with increased programme use<sup>19</sup>.

12. A study conducted to assess the effect of a 1 year intensified diet exercise education on regimen on habitual physical activity and aerobic capacity in middle aged, obese patients with newly diagnosed type 2 diabetes mellitus. After a 3 months basic education programme, 78 patients were randomly placed in intervention or conventionally treated group. The intervention group received intensified diet education and continuous encouragement to increase physical activity, which was monitored using exercise records and questionnaires. Aerobic capacity was assessed by measuring oxygen uptake at an aerobic threshold and at peak exercise. The proportion of patients with regular recreational exercise increased from 24% to 38% in the intervention men, increased from 53% to 70% in the intervention women and from 31% to 50% in conventionally treated women. No measurable improvements were found in oxygen uptake in any of the group<sup>20</sup>.

13. A study was conducted to investigate the influence of diet and physical training in patients with impaired glucose tolerance (IGT) on transformation from IGT to diabetes mellitus. 451 patients with GT were examined. Patients were

advised to keep an individually adjusted low calorie diet. And to perform the appropriate physical training exercise according to individual schedule. After 2 years the glucose tolerance of test was performed and data from diaries were analyzed. According to treatment compliance patients were divided into 3 groups: keeping diet and performed physical training 105 patients (Gropu1), medium compliance to 263 patients (Group 2), and refused of treatment 80 patients (Group3). The study showed that, the diet accompanied with regular physical training leads to decrease of body weight and improvement of glucose tolerance test. Absence of treatment in patients with IGT during 2 years leads to increase of body weight and proportion of patients with new diagnosed diabetes mellitus<sup>21</sup>.

#### **Literature Related to Foot Care**

14. A study was conducted to examine foot screening and foot care practices among people with diabetes, who are at risk of future foot ulceration. A population based study of 11,247 people from randomly selected area of Australia. Participants from this study identified as having known diabetes were invited to the complication study. 363 patients completed both the complication survey and diabetes questionnaire. The study results showed 57% reported a health professional and had examined their feet in the previous 12 months, 30% reported having seen a podiatrist in the previous 12 months and 63% reported they had examined their own feet in the last week. This study indicates that foot screening and education are inadequate and as likely consequence of these, foot care practices among those at high risk of foot ulceration are poor<sup>22</sup>.

15. A descriptive study was conducted to assess the diabetic neuropathy, pathophysiology and prevention of foot ulcer among diabetic patients. They found that 60% to 70% of those with diabetes mellitus often develop ulcer with potentially to lower amputation. Both of these are preventable. Hence study concluded that patients and family education can emphasis the importance of preventive foot self-care measures<sup>23</sup>.

**Methodology**

**Research Approach:** A quantitative approach is used to achieve the objective of the study.

**Research Design:** Descriptive design is used for the study.

**Variable**

**Independent Variable:** Knowledge of self-care management among newly diagnosed type 2 diabetic client.

**Sociod- Emographic Variables:** Socio-demographic variables such as family history, education, source of information, past illness, previous hospitalization.

**Setting of the Study:** The study will conducted in a selected hospital at Ghanekhunt Lote. It is a 100 beded hospital. On an average 100-120 diabetic patients are attended to the hospital per month.

**Population:** The data will be collected from the diabetic patients coming for the treatment of diabetes mellitus at Parshuram Hospital, Ghanekhunt-lote.

**Target Population:** The target population for the study is client those blood sugar levels is more than 120 mg/dl and are under treatment.

**Sample:** The sample for this study is Diabetic clients.

**Sample Size:** The sample size for the current study consists of 30 patients with Diabetes mellitus.

**Sampling Technique:** Purposive sampling technique will be used to the select the sample.

**Inclusion Criteria**

- 1) Patient who have diabetes mellitus and taking treatment
- 2) Those are able to read or write Marathi
- 3) Patients with diabetes mellitus who are willing to participate in the study

**Exclusion Criteria**

1. Patients with DM who are un co operative
2. Patients who have attended planned teaching program earlier.

**Description of Tool**

The tool consists of a self- administered questionnaire. It is divided into two parts.

**They are as follows:**

**Part 1:** This part consist of 5 items regarding demographic variables

**Part 2:** structured knowledge questionnaires to assess the knowledge regarding self-care management among newly diagnosed type 2 diabetes mellitus.

**Scoring of the Items:** For knowledge items each correct answer was given a score “one” and wrong answers a score of ‘zero’.

**Criteria for evaluation**

Knowledge level

11-15 marks – Good Knowledge

07-10 marks – Average knowledge

Less than 07 – Poor knowledge

**Data Analysis Plan:** The data obtained were analyzed in terms of objectives of the study using descriptive statistic. The plan of data analysis was as follows:

Organize data in a master sheet of computer

Personal data would be analyzed in terms of frequencies and percentages.

The knowledge of newly diagnosed type 2 diabetic client regarding self- care management would be analyzed in terms of frequencies, percentages, mean, median, standard deviation, and would be presented in the form of bar or columns, diagram.

The association between levels of knowledge with demographic variables would be determined by using “chi-square” test.

**Results**

This chapter deals with analysis and interpretation of data to assess the knowledge among newly diagnosed diabetic clients. A sample of 30 newly diagnosed diabetic clients. The data collected were organized, tabulated, analyzed and interpreted by using the descriptive and inferential statistic and described with the help of table and figure.

**Presentation of Data**

To begin with the data was entered in a master sheet for tabulation and statistical processing. The data is presented under the following headings.

Table No. 1: Frequency and distribution of samples according to demographic variables.

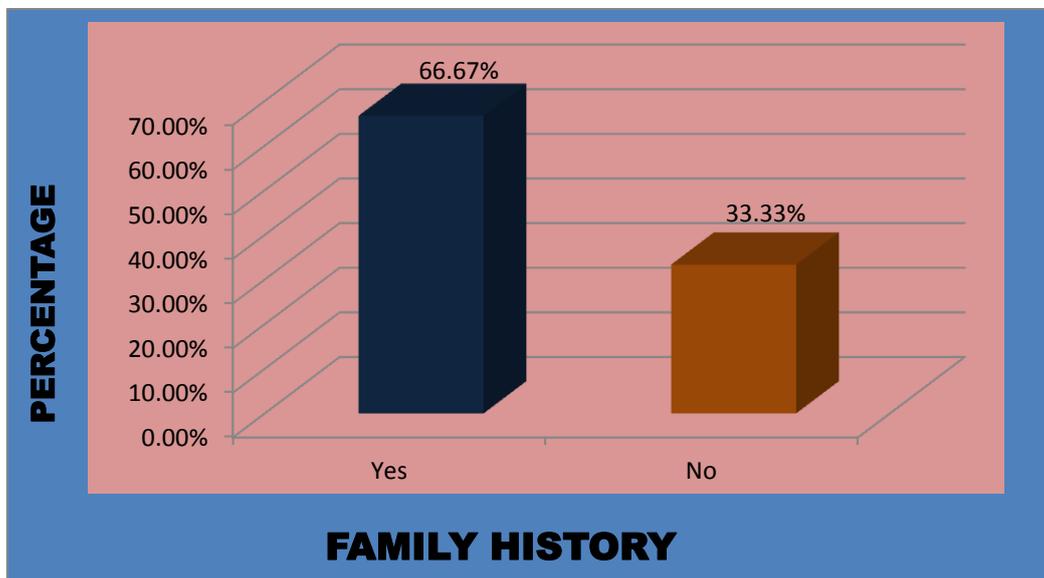
Table No. 2: Classification of respondents based in the level of knowledge

Table No. 3: Mean, SD, range and Mean percentage of respondents on self-care management among diabetic clients.

Table No. 4: Association between the levels of knowledge with demographic variables.

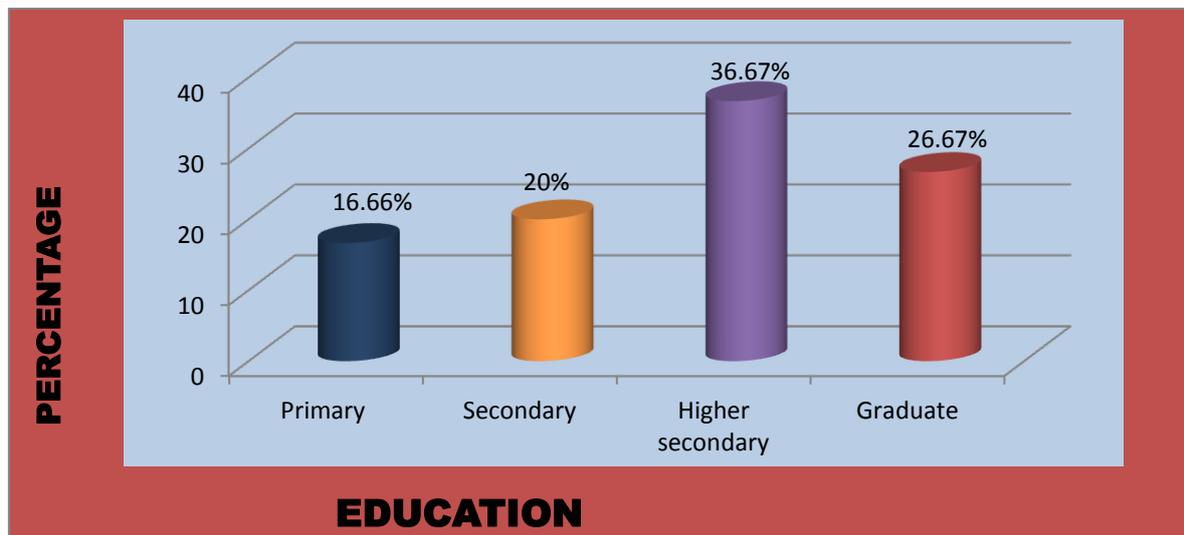
**Table No. 1:** Frequency and percentage distribution of samples according to demographic variables.

SR.NO.	DEMOGRAPHIC VARIABLES	FREQUENCY	PERCENTAGE (%)
1.	Family History		
	a)Yes	20	66.67
	b)No	10	33.33
2.	Education		
	a)Primary	05	16.67
	b)Secondary	06	20
	c)Higher secondary	11	36.67
	d)Graduate	08	26.67
3.	Source of Information		
	a)News paper	03	10
	b) T.V.	11	36.67
	c)Books	11	36.67
	d)Others	05	16.67
4.	Past Illness		
	a)Yes	06	20
	b)No	24	80
5.	Previous Hospitalization		
	a)Yes	09	30
	b)No	21	70



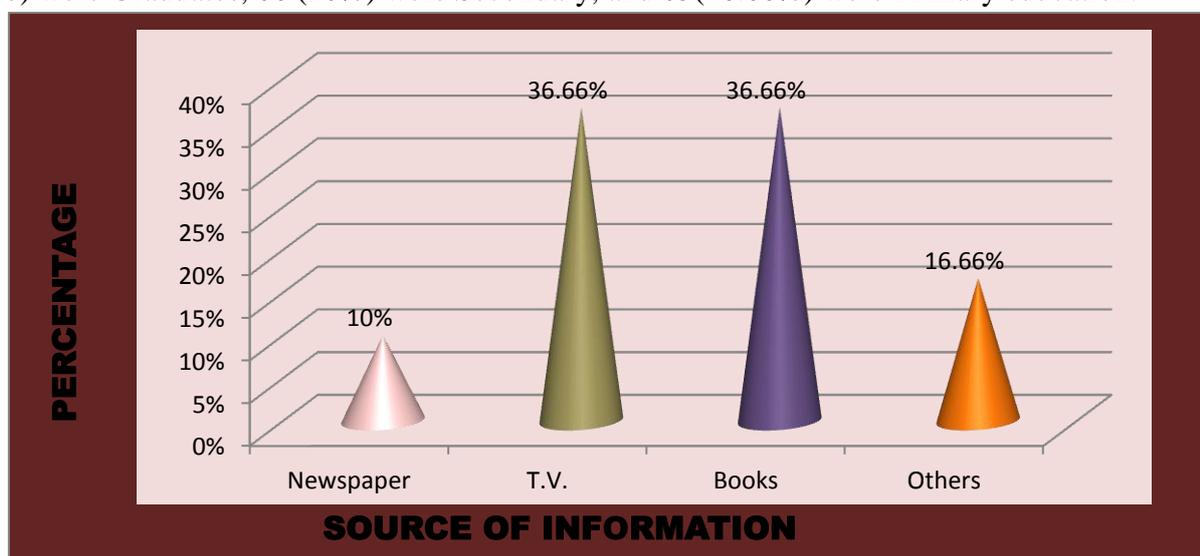
**Figure No.1:** Percentage distribution of respondents according to Family History

Table No- 1 Figure 1 shows that most of the client 20(66.67%) has Family History and 10(33.33%) have no family history of Diabetes mellitus.



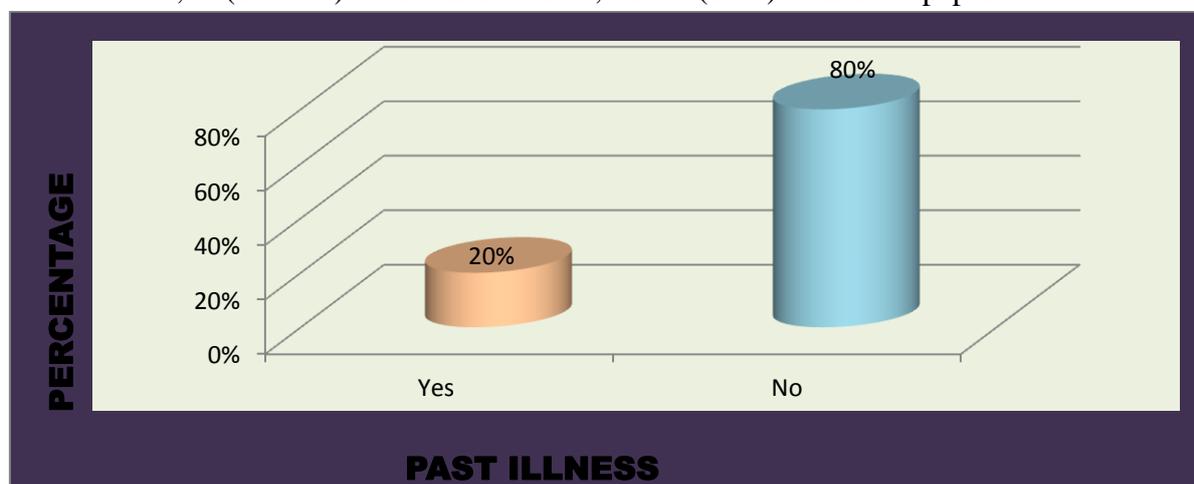
**Figure No.2** Percentage distribution of respondents according to Participants education

Table no.1, figure no.2, shows on education, most of Diabetic clients 11(36.67%) were higher secondary, 08 (26.67%) were Graduates, 06 (20%) were Secondary, and 05(16.66%) were Primary education.



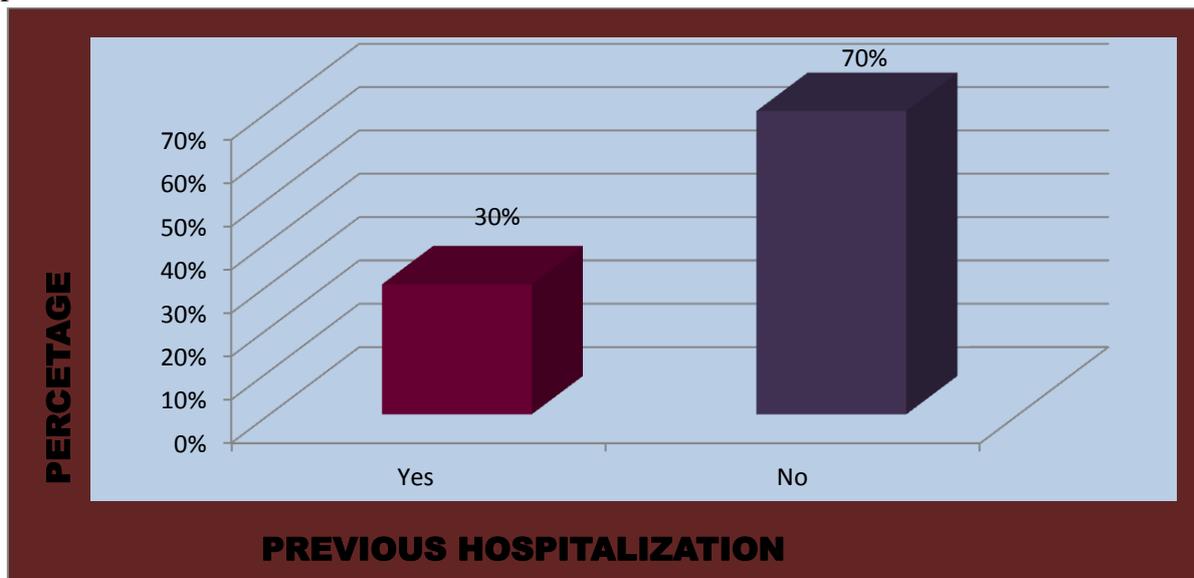
**Figure No.3.** Percentage distribution of respondents according to Source of Information

Table no.1, figure no.3 shows regarding source of information, 11(36.66%) of respondents got information from T.V. and books, 05(16.66%) from other sources, and 03(10%) from newspaper.



**Figure No.4** Percentage distribution of respondents according to past illness

Table no.1 and figure no.4 shows the past illness 24(80%) of respondents has no past illness, and 06(20%) having past illness.



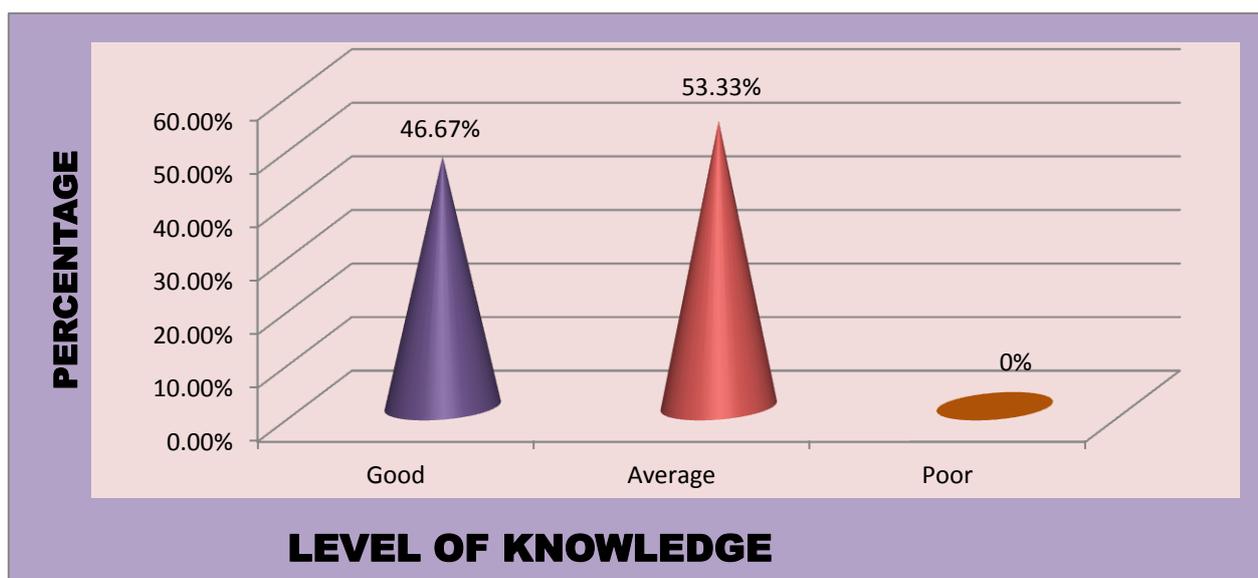
**Figure No.5** Percentage distribution of respondents according to previous hospitalization

Table no.1, figure no.5 shows that 21(70%) were not previously hospitalized, and 09(30%) were previously hospitalized.

Table No.2 – Classification of respondents based on Level of knowledge

N = 30

Knowledge	Category	Classification of respondents	
		Number	Percentage
Good	11 to 15	14	46.67%
Average	07 to 10	16	53.33%
Poor	Less than 07	00	00%



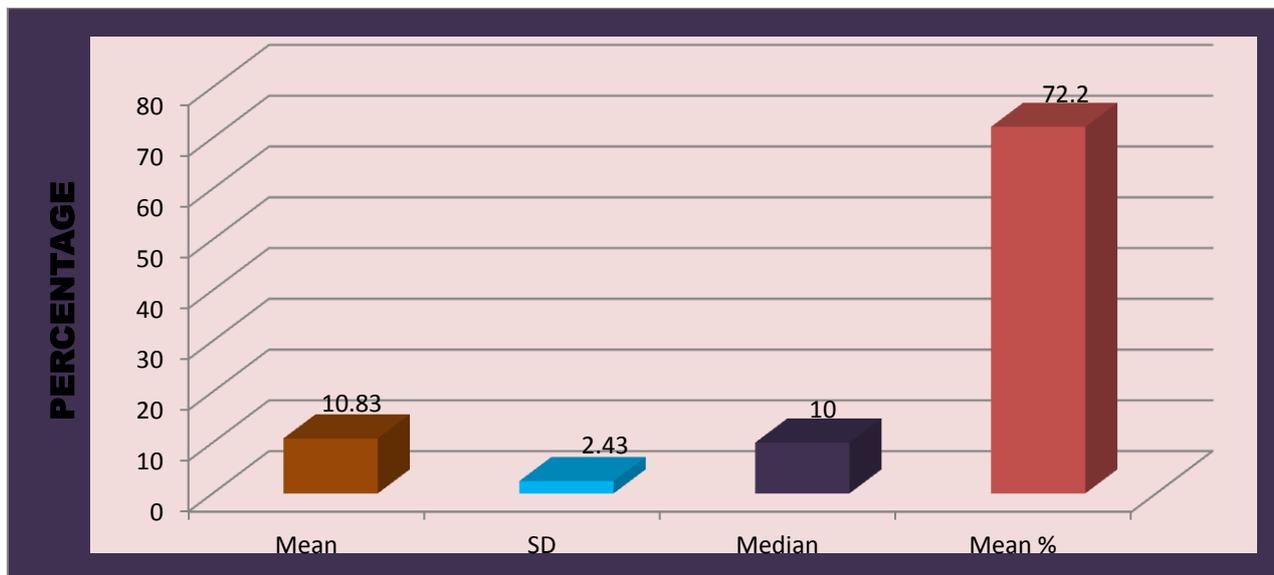
**Figure No.6** Percentage distribution of respondents according to level of knowledge

Table no.2, figure no.6 shows that the out of 30 clients, 14 (46.67%) client had Good knowledge,

16(53.33%) client had Average knowledge. And none of the client had poor knowledge.

**Table No.3:** Mean, SD, range and mean percentage of respondents on self- care management regarding diabetes mellitus.

Aspect	Max. Score	Knowledge of Respondents				
		Range	Mean	SD	Median	Mean%
Knowledge of self-care management	15	07-15	10.83	2.43	10	72.2



**Figure No.7** Percentage Distribution of respondents according to Mean, SD, range, and mean percentage.

Table no.3,figure no.7 shows that the data in table shows that knowledge score of diabetic clients was maximum score was 15,ranged from 07-15,

mean was 10.83, SD was 2.43, Median 10, and the mean percentage of knowledge was 72.2%.

**Table No.4** Association between the levels of knowledge with selected demographic variables  
N= 30

Sr.NO	Demographic Variables	Frequency	Knowledge Level		Chi Square			
			Median < 10	Median ≥ 10				
1.	Family History	20	05	15	4.13,df=1 P>0.05,S			
	A. Yes							
	B. No	10	05	05				
2.	Education	05	01	04		3.42,df=3 P<0.05,NS		
	A. Primary							
	B. Secondary				06		03	03
	C. Higher Secondary				11		05	06
	D. Graduate	08	01	07				
3.	Source of Information	03	01	02	3.80,df=3 P<0.05,NS			
	A. News paper							
	B. T.V.					11	02	09
	C. Books					11	06	05
	D. Other	05	01	04				
4.	Past Illness	06	02	04	0,df=1 P<0.05,NS			
	A. Yes							
	B. No	24	08	16				
5.	Previous Hospitalization	09	00	09		5.71,df=1 P>0.05,S		
	A. Yes							
	B. No	21	10	11				

The data presented of table no 4 shows that there was significant association between Family History 4.13,  $df = 1$ ,  $P > 0.05$  and previous hospitalization 5.71,  $df = 1$ ,  $P > 0.05$  with the knowledge of self-care management. Hence there was significant association between Family history, previous hospitalization with knowledge of self-care management of newly diagnosed diabetic clients.

### Discussion

This section deals with discussion about the findings. This study evaluates to assess the knowledge regarding self-care management among newly diagnosed type 2 diabetic client in a Parshuram Hospital, Lote. The data was collected and analyzed on the basis of objectives and hypothesis formulated for the study.

The first objective is to assess the level of knowledge regarding self-care management among newly diagnosed type 2 diabetic clients.

Overall knowledge level categorized as Poor (less than 7 score), Average (07-10 score), and good (11-15 score). The table shows that out of 30 (46.66%) had good knowledge, (53.33%) had average knowledge. None of the diabetic clients were having poor knowledge.

The second objective is to find out the association between level of knowledge regarding self-care management among diabetic clients and selected demographic variables.

Overall association between level of knowledge regarding self-care management with selected demographic variables such as family history and previous hospitalization was found association. And other education, source of information, past illness were found not significant association with knowledge score.

Testing of hypothesis

### Conclusion

The overall knowledge about knowledge regarding self-care management among newly diagnosed type 2 diabetic clients is adequate. Overall association between level of knowledge

regarding self-care management with selected demographic variables such as family history, previous hospitalization were found significant association. And education, past illness, previous hospitalization was found no significant association with knowledge score.

So we came to conclusion that, Overall knowledge level categorized as Poor (less than 7 score), Average (7-10 score), and Good (10-15 score). The table shows that out of 30 clients 14 (46.67%) client had Good knowledge, 16 (53.33%) client had Average knowledge.

### Nursing Implications

The findings of this study have implication for nursing service, nursing education, nursing administration and nursing study.

### Nursing Service

As a member of health care team, the nurses play an active role in promotion of health provision of disabilities, curation of illness and rehabilitation of deformities.

The finding of the study could be utilized as a basis for in service education of a student so that improved of nurses knowledge regarding self-care management among diabetic clients.

### Nursing Education

In the changing of health care delivery system, since the emphasis is shifted from care oriented approach nurses need to gain more knowledge on various aspects of nursing as a standard profession.

### Nursing Administration

Nursing administrator must plan a separate budget for continuing education program related to increase knowledge regarding self-care management among diabetic clients.

### Nursing Study

In the past action of the nurses have been based on training or authorities which are no longer acceptable in the age of study based practice. Nurses should be able to justify the decision they make and the care that they provide study can help increase the body of public knowledge regarding nursing profession. Study on knowledge can

reveal significant finding there is need for the study based on standards of practice.

### Recommendations

- 1) A similar study can replicate on a sample with more valid generalization.
- 2) A similar study may be replicated with a control group.
- 3) An exploratory study can done to assess knowledge regarding self-care management among newly diagnosed type 2 diabetic clients.

### Summary

A descriptive study has conducted assess knowledge regarding self-care management among newly diagnosed type 2 diabetic clients in the Parshuram Hospital and Research Center, Lote.

### Objectives of the study were

- 1) To assess the level of knowledge regarding self-care among diabetic patients.
- 2) To find out the association between level of knowledge regarding self-care management among diabetic patients and selected variables.

Study attempted to test the hypothesis stated which was there will be association between knowledge of self-care management among diabetic clients with demographic variables.

So, study hypothesis is accepted.

An evaluative approach was used for the study. The study design selected for the study was non-experimental descriptive study and was used to assess the knowledge regarding self-care management among diabetic clients. The sample of the study comprised of 30 diabetic clients. Purposive sample technique was used. The tools used for the study were structured knowledge questionnaire.

### Final Findings of the present study

The data in the table show that, knowledge level of diabetic clients categorized as Poor (less than 7 score), Average (7- 10 score) and Good (11- 15 score). The table shows that out of 30 clients 14

(46.67%) client had Good knowledge, 16 (53.33%) client had Average knowledge. None of the clients were having poor knowledge. SD was 2.43; mean percentage knowledge was 72.2. It indicates that diabetic clients had good knowledge.

There was significant association between knowledge and demographic variable such as family history, previous hospitalization. And there was no significant association between knowledge and demographic variables such as Education, Source of information, past illness.

### Bibliography

1. Razaei M, Safavi A. et al. Journal of Diabetology, Oct.2015; 3:2
2. American Diabetes Association, Economic Consequences of Diabetes Mellitus US in 1997, Diabetes care 1998, 296 – 309.
3. Makol N. Diabetes an emerging health problem in India. Health Action 2008 Sep 4-6
4. Gala DR, Gala S. Diabetes, high blood pressure without any fear. Mumbai: Navneet Publications (India) Ltd. 2004.
5. Sheeba J, Snehalatha C. Self-administration of insulin in diabetes. Nightingales Nursing Times 2011, Mar; 6 (12): 33-5,37-8, and 53.
6. Brunner and Siddharth, textbook of Medical surgical nursing, 10<sup>th</sup> Edition, Philadelphia, Lippincott Williams and Wilkins, 2004, 294-297
7. Tadele A, Tefera B, Endalew H, World Journal of medicine and medical science, vol.2, No.3, March 2014, P- 1 - 16
8. Shalini GS, Venkatesan L, Ben A. Effectiveness of structured teaching programme on home care management of Diabetes mellitus. Nightingale Nursing Times 2006, Nov.4.
9. Chyamym Molassiotics, A study to assess diabetes knowledge and compliance behavior with demographic data, diabetes care, 1999 Dec; 22(3); 71-75

10. Watking K.A. A study on effect at a adults self-regulation of diabetes on quality of life outcome, Columbia; 2000: www.medline.com
11. Shivganam G, Namsivayam K, Rajasekaram M, Triumalai P, Ravichandran C, A study to compare and determine the knowledge, belief and practices of diabetes receiving free medical care and those paying for medical care in Tamilnadu, India Ann.N.Y. Academic science 2002, Apr. 958: 416-9
12. Wen L.K, Shepherd M.D, Darchman M.C, Family support, diet and exercise among order Mexican Americans with type-2 diabetes, Diabetes education, 2004 Nov-Dec; 30(6): 980-93.
13. Miss. Anitha S.A, A study to assess the knowledge and attitude of self-care activities among patients' with diabetes mellitus, Chennai, 2004 Aug (unpublished research).
14. Wittert G.A, Luscombe N, Noaker M, Praker B, Clifton P, the effect at increased dietary protein on weight loss and insulin resistance in obese men and women, Australia ; 2000: www.pubmed.com
15. Muscy V.C, Anderson L.A, Ziemer D.C, Berkowitz K.J, Panaryioto R.M, a simple meal plan emphasizing healthy food choices as effective as an exchange based meal plan for urban African with Type-2 diabetes, Diabetic care, 2003; Jun: 26(6): 1719-24
16. Takahasmi M, Arati A, Ito H, development of a new method for simple dietary education in elderly individual with diabetes mellitus, Nippon Ronen Igakkai Zasshi, 2002 Sep; 39(5): 527-32
17. Venters Jy, Hunt AE, Pope JF, Molaison B.F, Are patients with diabetes receiving the same message from dietitians and nurses, Diabetes education, 2004; Mar-Apr; 1001(1): 1-2.
18. Boden G, Sargrad K, Homko C, Mozzoli M, Stein TP, Short-term effects of low-carbohydrate diet compared with usual diet in obese patients with type-2 diabetes, Annual of internal medicine, 2005 Mar; 142(6): 403-11.
19. MC Kay HG, King D, Eakin EG, Seelay JR, The diabetes network internet based physical activity intervention; a randomized pilot study, Diabetes care.2001; Aug; 24(8): 1328-34.
20. Vanninen E, Uusitupa M, Siitonen, Lajtinen J, Hospital physical activity, aerobic capacity and metabolic control in patients with newly diagnosed type-2 diabetes mellitus. Diabetologia, 1992 Apr; 35(4): 340-6.
21. Karpova, Zaleskaya A, Bregovsky V, The effect of diet and physical training in patients with impaired glucose tolerance; 2 year follow up, Netherland, 2003: Jan; 95(8): 52-4.
22. Welbom TA, Zimet PZ, Foot screening and foot care among those at high risk of foot ulceration: The AUSDiab study, Australia 2001: available from: <http://www.easd.com>
23. Zangero, Hall Diabetic Neuropathy, Pathophysiology and prevention of foot ulcer, Clinical nurse specialist, 2000; 13: 57-65.