



A DESCRIPTIVE STUDY TO ASSESS THE LEVEL OF KNOWLEDGE ON SELF ADMINISTRATION OF INSULIN AMONG DIABETIC PATIENTS AT MARAIMALAI NAGAR, KATTANKULATHUR, KANCHEEPURAM DISTRICT

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ABSTRACT

Diabetes is a disorder characterized by impaired metabolism of carbohydrates, proteins and fats due to inadequate activity of insulin. Type II diabetes is characterized by insulin resistance a relative deficiency or both. It usually develops in adulthood. A Descriptive Study To Assess The Knowledge On Self Administration Of Insulin Among Diabetic Patients Who Were On Insulin Therapy Patients At Maraimalai Nagar, Kattankulathur, Kancheepuram District". The objective of the study were to assess the level of knowledge on self-administration of insulin injection among diabetic patient who were on insulin therapy and to associate the selected demographic variables with knowledge on self- administration of insulin injection among diabetic patient who were on insulin therapy. Descriptive research design was used for this study. Non probability convenient sampling method was adapted to select the 100samples for this study. The study findings revealed that among 100 samples, 11(11%) had moderate knowledge, 89(89%) had inadequate knowledge and none of them had adequate knowledge. And also there is no statistical association between the level of knowledge and selected demographic variables. Study conclude that Diabetes patients who have under self-administration of insulin therapy majority of them are having inadequate knowledge of self-administration of insulin .This study recommended that repeat awareness programme and demonstration on the self- administration of Insulin therapy at community setting.

KEYWORDS: Knowledge, self- administration, Diabetic patients and insulin therapy.

INTRODUCTION

Non-communicable Diseases (NCD)/chronic diseases are reported to be responsible 60% of all the deaths (35 million deaths out of a total 58 million) in the year 2005. Eighty percent of all these deaths occur in low middle income countries (WHO 2006). Approximately 86% of the chronic diseases occur in people below the age of 70 years.

The world health organization estimates that the total number of diabetes worldwide will reach 333 million in 2025 from 135 million in 1995. Regarding western world diabetes mellitus is one of the most common chronic disorder since in 2007, it was estimated that there was 2446 million people with diabetes compared to 194 million in 2005.

Diabetes currently affects more than 62 million Indians which is more than 7.1%5 of the adult population. A study by the American Diabetes Association reports that India will see the greatest increase people diagnosed with diabetes by 2030.

In particular, the correct handling of the insulin injection requires complex self-management abilities. By reviewing the previous studies it's evident that the diabetic patients have lesser knowledge regarding its management especially in the aspects such as administration of insulin injection.

MATERIALS AND METHODS

Objectives

To assess the level of knowledge on self-administration of insulin injection among diabetic patient who were on insulin therapy.

To associate the selected demographic variables with knowledge on self-administration of insulin injection among diabetic patient who were on insulin therapy.

Operational Definition

Knowledge

Knowledge refers to information and skills gained through education or experience.

ASSESS

It is the estimation of knowledge on self-administration of insulin.

Insulin

Insulin is a hormone secreted by the beta cells in the pancreas which controls the level of glucose in the blood by regulating the production and storage of glucose.

Self-Administration

Self-administration is, in its medical sense, the process of a subject administering a pharmacological substance to themselves a clinical example of this is the subcutaneous "self-injection" of insulin by a diabetic patient.

Hypothesis

There is no association between the selected demographic variables with the knowledge of self-administration insulin injection among the diabetic patients.

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Delimitation

- The study was delimited to 100 samples
- The study period was delimited to one week of data collection.
- The study was delimited to people in community area(Maraimalainagar).

Methodology**Research Approach**

Quantitative approach was used for this study by the investigators to achieve the objectives of the study.

Research Design

Descriptive research design was adapted for this study.

Setting

The study was conducted at Maraimalainagar.

Population

- TARGET POPULATION- The patients who are diagnosed as diabetes mellitus.
- ACCESSIBLE POPULATION- The patients who are on self-administration of insulin.

Sample

The patients who are on self-administration of insulin in Maraimalainagar.

Sample Size

The study size was 100.

Sampling Technique

Non probability convenient sampling method was adapted for the study.

Variables

STUDY VARIABLE- Knowledge regarding self-administration of insulin.

DEMOGRAPHIC VARIABLE- Age, sex, educational status, occupation, duration of treatment, source of information are the demographic variables.

Inclusion Criteria

- Patients who diagnosed as diabetic mellitus.
- Patients who are living in Maraimalainagar community area
- Patients who are able to understand Tamil or English
- Patients who are under self-administration of insulin

Exclusion Criteria

- Patients who are not able to understand Tamil or English
- Patients who are not willing to participate in the study
- Patients who are not under self-administration of insulin

Description of Data

SECTION-A: This section consists of demographic data age, sex, educational status, occupation, duration of treatment and source of information.

SECTION-B: Assessment of knowledge of patients with diabetes mellitus on self-administration of insulin by using multiple choice questions regarding self-administration of insulin. There are 25 questions totally. Each question has 1 correct response and to each correct response a score of 1 was given.

Grading Score

Below 50% - Inadequate knowledge
(51-70)% - Moderate knowledge
>71% - Adequate knowledge

Content Validity

The investigator obtained the content validity of the tool by giving the tool of the guide and other faculty of SRM College of Nursing. The suggestion were incorporate in this tool.

Reliability

In order to assess the reliability of the questionnaire, the test-retest method was done on the samples at Maraimalainagar. On statistical analysis, the reliability of the tool was found to be 0.8.

Ethical Consideration

Human Rights: Formal approval was obtained from the institution review board of SRM College of Nursing, Kattankulathur, KancheepuramDist., Tamilnadu, India.

Beneficence and Non-Mal Efficiencies: Potential benefits and risk was explained to the patients with diabetes

Dignity

1. Informed consent was obtained from the samples.
2. Pilot study was executed to check the feasibility and time requirement of Confidentiality: Confidentiality and Anonymity pledge was ensured.

diagnosed as diabetes mellitus were selected. The purpose of the study was explained and interviewed using structured questionnaire. The time spent for each client was 15 minutes. There was good co-operation from the samples.

Pilot Study

The pilot study was conducted in Maraimalainagar. A sample of 3 patients who met the inclusion criteria was selected by using convenient sampling technique. The data was collected after explaining the purposes of the study. The results were analyzed based on the score obtained by using descriptive and inferential statistics.

Plan for Data Analysis

Data collection was analyzed by descriptive and inferential statistics

1. Frequency percentage distribution was used to analyze the demographic variables.
2. Mean and standard deviation to analyse the level of knowledge on self-administration of insulin.
3. Chi square test was used to associate the knowledge of diabetic patients on self-administration of insulin with selected demographic variables.

Data Collection Procedure

The main study of data collection was done on community area. Both male and female who are

RESULTS AND DISCUSSION

Frequency and Percentage Distribution Of Demographic Variables N=100.

S.NO	Demographic variables	Class	No.of respondents	Percentage
1.	Age	20-40 years	21	21%
		40-60 years	54	54%
		60-80 years	25	25%
2.	Gender	Male	50	50%
		Female	50	50%
3.	Education	Primary school	25	25%
		High school	49	49%
		Graduate	13	13%
		Illiterate	13	13%
4.	Occupation	Unemployed	1	1%
		Employed	99	99%
5.	Years of self-administration of insulin	Less than 5 years	85	85%
		5-10 years	15	15%
		More than 10 years	0	0%
6.	Self-administration of insulin was demonstrated by	Doctors	7	7%
		Nurses	88	88%
		Others	5	5%
7.	Source of Information	Health worker	88	88%
		Television	0	0%
		Family member	12	12%

Frequency and percentage distribution of level of knowledge.

S.NO	Level of knowledge	No. of respondents	Percentage
1.	Adequate	0	0%
2.	Moderate	11	11%
3.	Inadequate	89	89%

Association between the demographic variables and the level of knowledge

S. NO	Demographic variables	Class	Level of knowledge		Chi - Square value	DF	Pvalue
			Moderate	Adequate			
1.	Age	20-40 years	3	18	1.695	2	0.428
		40-60 years	7	47			
		60-80 years	1	24			
2.	Gender	Male	6	44	0.1021	1	0.749
		Female	5	45			
3.	Education	Primary school	1	24	1.839	3	0.606

		High school	6	43			
		Graduate	2	11			
		Illiterate	2	11			
4.	Occupation	Unemployed	0	1	0.125	1	0.724
		Employed	11	88			
5.	Years of self-administration of insulin	Less than 5 years	10	75	0.338	1	0.561
		5-10 years	1	14			
		More than 10 years	2	5			
6.	Self-administration of insulin was demonstrated by	Doctors	2	5	2.879	2	0.237
		Nurses	9	79			
		Others	0	5			
7.	Source of Information	Health worker	10	78	0.099	1	0.753
		Family member	1	11			

The analysis of the findings showed that among 100 samples 21% of them were under the age group of 20-40 years and 54% of them were the age group of 40-60 years. Regarding the gender 50% were females and 50% were males. Considering the education 25% of them primary school, 49% of them higher secondary school, 13% of them graduate and 1% of them illiterate. Considering the occupation 1% of them under unemployment and 99% of them under the employment.

With regard to years of self-administration of Insulin 85% of them use self-administration in less than 5 years, 15% of the cases use of self-administration in 5-10 years. Considering the self-administration of insulin in demonstrated by 7% of them demonstrated by the doctors, 88% demonstrated by the nurse and 5% of them by others. Considering the source of information 88% of them get a information from health worker, 12% of them get a information from family member.

The first objective of this study was to assess the level of knowledge among diabetes patients.

The data analysis shows that among 100 patients 0(0%) have adequate, 11(11%) moderate knowledge, 89(89%) inadequate knowledge.

Sajai XSBN (2017) conducted a study to assess the knowledge about self-administration of insulin among diabetic patients. The study reveals that 12 participants (60%) are having good knowledge regarding self-administration of insulin injection, 6 participants (30%) are having average knowledge regarding self-administration of insulin injection and 2 participants (10%) are having poor knowledge regarding self-administration of insulin injection.

This study supported by the finding of Tadele K, etal(2017) conducted study to assess the level of adherence to insulin self-administration and associated factors among type I diabetic patient. According to this study 30.9% of the respondents were adhered and 69.1% were not adhered to insulin self-administration within the last three months

The second objective of this study was to associate the selected demographic variables with knowledge on self-administration of insulin injection among diabetic patient who were on insulin therapy.

Finding revealed that there is no statistical association between the level of knowledge and selected demographic variables.

Recommendations

1. Similar study can be conducted with large sample
2. Similar study can be conducted in the hospital set up
3. Comparative study can be conducted to assess the level of knowledge on self-administration among male and female diabetic patients.
4. Effectiveness of structured teaching on self-administration of insulin can be assessed among diabetic patients

CONCLUSION

Diabetes patients who have under self administration of insulin therapy majority of them inadequate knowledge of self administration of insulin. This study recommended that repeat awareness programme and demonstration on the self administration of Insulin therapy at community setting.

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CONFLICT OF INTEREST

We declare that we have no conflict of interest.

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