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## **A study to assess the knowledge and practice of self-administration of insulin in a view to develop self-instructional module [SIM] among patients with diabetes mellitus in selected hospitals of Pune city**

**Ankita Bhosale, Anupriya Kharat, Smita Doiphode and Shivcharan Singh Gandhar**

### **Abstract**

**Introduction:** Diabetes mellitus is recognized as one of the leading cause of death and disability worldwide. Information and education gives improvement in the knowledge, attitudes and skills which leads to better control of the disease and is widely accepted to be an integral part of the comprehensive diabetes care. More emphasis should be given to the standardization and improvement of techniques, the people to become more aware of their responsibility and make fewer mistakes during insulin administration, since the treatment of diabetes continues for lifetime, there is a need to monitor the knowledge, understanding and practice of clients in relation to their disease process and its management.

**Purpose:** to assess the knowledge and practice of self-administration of insulin in a view to develop self-instructional module among the patients with diabetes mellitus in selected hospitals of Pune city

**Objectives:** To assess the knowledge regarding self-administration of insulin among patients with Diabetes Mellitus, to assess the practice regarding self-administration of insulin among patients with Diabetes Mellitus, to associate findings with selected demographic variables.

**Methods:** This was a Non experimental descriptive research design and quantitative research approach. 60 diabetic patients were selected from selected hospitals by non-probability purposive sampling technique. Self-structured questionnaire was used to assess knowledge with the observational check list for assessing practice of self-administration of insulin.

**Results:** Mean score of knowledge regarding self-administration of insulin in patients with diabetes mellitus was 19.81 with 3.25 standard deviation that shows good knowledge, Mean score of practice regarding self-administration of insulin in patients with diabetes mellitus was 7.85 with 1.81 standard deviation that shows Average practice, and the 'p' value was more than level of significance 0.05 so no any association found between all demographic variables with knowledge and practice

**Conclusion:** knowledge regarding self-administration of insulin was good and practice was average.

**Keywords:** Parental attitude, participation, sports, girls

### **1. Introduction**

#### **Insulin will have tremendous impact, when it is used properly**

Diabetes mellitus is a silent disease and is not recognized as one of the fastest growing threats to public health in almost all countries of the world. It is also called the -disease of prosperityl.

The term Diabetes mellitus (DM) describes a metabolic disorder of multiple etiological factors characterized by chronic hyperglycemia with disturbances of carbohydrates, fats and protein metabolism resulting from defects in insulin secretion, insulin action or both.

The treatment for DM includes administration of oral hypoglycemic agents and insulin therapy along with lifestyle modifications. The insulin therapy requires coordination and understanding of both the individuals with diabetes mellitus and those who are responsible for 2 diabetic care. The dosages of insulin changes based on patient's blood glucose levels and the type of insulin used. Therefore, insulin treatment must be individualized and metabolism of individual with diabetes.

**2. Methodology**

Quantitative research approach with non-experimental research design was adopted the study was conducted on 60 diabetic patients who are on self-administration of insulin in selected hospitals of Pune city by using non probability purposive sampling technique. The data was collected by using self-administered questionnaire and checklist. Content validity of the tool was established by suggestion of five

experts. Tool was found reliable, which is calculated by split half and inter rater method (R=0.92)

Ethical consideration: formal administrative approval was obtained from selected hospitals of Pune city and obtained written inform consent from the participants.

**3. Findings**

**Section I:** Analysis of data related to demographic variables of the samples under the study

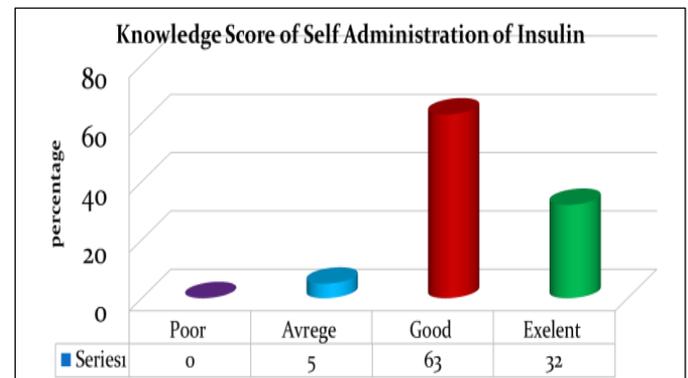
**Table 1:** Frequency and percentage distribution of the patients with diabetes mellitus according to the demographic variables

Sr no	characteristics	frequency	Percentage %
1	<b>Age:</b>		
	a) 10-20	0	0%
	b) 21-30	0	0%
	c) 31-40	7	11.70%
	d) 41-50	21	35%
	d) 50 and above	32	53.30%
2	<b>Gender</b>		
	a) male	29	48.305
	b) female	31	51.70%
3	<b>Education:</b>		
	a) no formal education	13	21.70%
	b) primary	17	28.30%
	c) secondary	20	33.30%
	d) graduate	10	10.0%
	e) post graduate	0	0%
	f) any other	0	0%
4	<b>Monthly income:</b>		
	a) up to 10000/-	16	26.70%
	b) 11000to 20000/-	20	33.30%
	c) 21000to 30000/-	16	26.70%
	d) 31000and above	8	13.30%
5	<b>Duration of diabetes mellitus diagnosed:</b>		
	a) 1month to 1 year	6	10%
	b) 1year to 3 years	18	30%
	c) 3 years to 5 years	11	18.30%
	d) 5 years to above	25	41.70%
6	<b>Duration of self-administration of insulin:</b>		
	a) 1 month to 1year	28	46.70%
	b) 1year to 3 years	13	21.70%
	c) 3 years to 5 years	7	11.70%
	d) 5years and above	12	20%
7	<b>Family history of diabetes mellitus:</b>		
	a) yes	42	70%
	b) no	18	30%

Above table shows that majority of samples were in age group 50 and above that is (53.30%), Majority of samples (33.30%).were having secondary education Majority of samples (33.30%). were having monthly income between 11000to 20000/-rupees Majority of samples (41.70%) were diagnosed diabetes more than 5 years Majority of samples (46.70%) having the duration of self-administration of insulin from 1 month to 1 year Majority of samples (70%) were having the Family history of diabetes mellitus.

**Section II**

Analysis of data related to knowledge regarding self-administration of insulin in patients with diabetes mellitus.



**Fig 1**

Majority of samples (63%) were having good knowledge some samples (32%) were having excellent knowledge and only few (5%) were having average knowledge. Mean score of knowledge regarding self-administration of insulin in patients with diabetes mellitus was 19.81 with 3.25 standard deviation that shows good knowledge.

Practice	Frequency	Percentage
Poor	0	0
Average	28	46.6
Good	19	31.6
Excellent	13	21.8

Majority of samples (46.6%) were having Average practice some samples (31.6%) were having good practice and only few (21.8%) were having excellent practice. Mean score of practice regarding self-administration of insulin in patients with diabetes mellitus was 7.85 with 1.81 standard deviation that shows Average practice.

**Section III**

Analysis of data related to Practice regarding self-administration of insulin among patients with diabetes mellitus.

**Section IV**

Analysis of data related to association between knowledge and practice regarding self-administration of insulin.

No.	Demographic variable					p value
		poor	good	average	exelent	
<b>1 Age</b>	10 to 20	0	0	0	0	0.99
	21 to 30	0	0	0	0	
	31 to 40	0	0	6	1	
	41 to 50	0	2	13	6	
	50 and above	0	1	19	12	
<b>2 Gender</b>	Male	0	2	18	9	0.63
	Female	0	1	22	8	
<b>3 Education</b>	No formal education	0	0	9	4	0.97
	Primary	0	1	10	6	
	Secondary	0	1	14	5	
	Graduate	0	1	4	3	
	Post Graduate	0	0	1	1	
<b>4 Monthly Income</b>	Any Other	0	0	0	0	0.35
	Up to 10000	0	0	13	4	
	11000 to 20000	0	1	13	6	
	21000 to 30000	0	0	9	7	
<b>5 Duration of Diabetes Mellitus diagnosed</b>	31000 and above	0	2	3	2	1
	1 month to 1 year	0	0	4	2	
	1 years to 3 years	0	1	12	5	
	3 years to 5 years	0	0	7	4	
<b>6 Duration of self administration of Insulin</b>	5 years and above	0	2	15	8	0.92
	1 month to 1 year	0	0	19	9	
	1 years to 3 years	0	2	8	3	
	3 years to 5 years	0	0	4	3	
<b>7 Family history of Diabetes Mellitus</b>	5 years and above	0	1	7	4	0.33
	Yes	0	3	30	12	
	No	0	0	7	8	

The 'p' value was more than level of significance 0.05 so no any association found between all demographic variables with knowledge and practice

**4. Discussion of the research findings**

In one of the study the researcher wishes to assess knowledge attitude and practice of Insulin use in adult

patient with diabetes mellitus in tertiary care centre was found the poor knowledge and positive attitude.

Similarly in our study too we observe the knowledge and practice of self-administration of insulin was good and average.

Due to lack of time we cannot perform the intervention but we have prepare and providing self-instructional module for patients.

## 5. Conclusion

On the basis of findings of the present study, it can be concluded that patient with self-administration of insulin are having good knowledge and average practice so self-instructional module has prepared to enhance practice of self-administration of insulin.

## 6. Recommendation

1. A study can be done on large sample.
2. A comparative study can be done to assess the knowledge and practice regarding self-administration of insulin in a patient with diabetes mellitus.
3. An experimental study can be done to assess effectiveness of experiment on knowledge and practice of self-administration of insulin in a patient with diabetes mellitus.
4. Longitudinal study can be performing to evaluate knowledge and practice of self-administration of insulin among the diabetic patients.

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## 8. References

1. <https://www.article.sciencepublishinggroup.com>pdf>
2. [https://www.scopemed.org/?mno\\_knowledge\\_and\\_attitude\\_on\\_self-administration\\_of\\_insulin](https://www.scopemed.org/?mno_knowledge_and_attitude_on_self-administration_of_insulin).
3. <https://www.researchgate.net>publications>
4. <https://www.ncbi.nlm.nih.gov>articles>
5. [http://www.scielo.br/scielo.php?script=sci\\_arttext&pid=S0104-11692008000200010tion](http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0104-11692008000200010tion)
6. <http://www.ijncd.org/article.asp?issn=2468-8827;year=2016;volume=1;issue=2;spage=59;epage=64;aulast=Kurian>
7. <https://www.ajpcr.com/Vol5Issue1/686.pdf>
8. Lewis Sharon L, Dirksen Ruff Shannon, O'Brien Graber Patricia, Bucherolinda. Medical Surgical Nursing, 7th edition. St. louis: Elsevier, 2009, 1422-1438.
9. Black Joyce M, Jacobs Esther Matassarini. Medical-Surgical Nursing, 7th edition. New Delhi: WB. Saunders Company, 2008.
10. Nettina Sandra M, Lippincott manual of Nursing Practice.8th edition. India: Jaypee Brothers, 2006, 912.
11. Prabhudeva SS. Nightingale Nursing Times. Nov. 2009; 5(8):13.
12. Poniema Leventhal H. Journal of internal Medicine. 1999; 7(7):624-627.
13. Dr. Majra JP, Dr. Das Acharya. Awareness Regarding Self Care among Diabetics in Rural India.middle east jur of fam med. [Serial online] Jul 2009 [cited on 2009 Nov 10]; 7(6). Available from URL. [http://www.mejfm.com/mejfmJuly09\\_vol7-iss6/awareness.htm](http://www.mejfm.com/mejfmJuly09_vol7-iss6/awareness.htm)
14. James Norman. Diabetes Introduction. Endocrine web [Serial online] Sep 2009 [cited on 2009 Nov 10]; Available from URL. <Http://www.endocrineweb.com/diabetes>

15. Thaís Santos Guerra Stacciarini; Ana Emilia Pace; Vanderlei José Haas. Insulin self-administration technique with disposable syringe among patients with diabetes mellitus followed by the family health strategy. Rev. Latino-Am. Enfermagem [Serial online] July/Aug. [cited on 2009 Nov 10]; Available from URL, 2009, 17(4). [http://www.scielo.br/scielo.php?pid=S0104-11692009000400007&script=sci\\_arttext](http://www.scielo.br/scielo.php?pid=S0104-11692009000400007&script=sci_arttext)
16. Prevalence of diabetes. Data and statistics by World Health Organization. Available from URL: <http://www.who.int/research/en/>