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**ASSESSING THE KNOWLEDGE REGARDING INSULIN ADMINISTRATION  
AMONG TYPE 2 DIABETES MELLITUS PATIENTS ATTENDING OUTPATIENT  
DEPARTMENT OF SELECTED HOSPITAL IN GOA.**

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**ABSTRACT**

The research study titled “Assessing knowledge regarding insulin administration among type 2 diabetes mellitus patients attending outpatient department of selected Hospital in Goa. The objective of this study were to assess knowledge about type 2 diabetes patient about insulin administration and to find out any association between level of knowledge and selected demographic variables. The hypotheses for this study were participants will have poor knowledge related to administration of insulin and there will be association between knowledge of participants and their selected demographic variables. Quantitative survey approach and descriptive design was used in the study. Samples 60 were selected using non-probability sampling technique within age group of 30 to 60 years. Data was collected using structured knowledge questionnaire and analyzed using descriptive and inferential statistics. The study findings revealed that, majority 34(56.65%) participants were above 60 years, 17 (28.3%) were between 50 to 60 years, 7(11.2%) participants were 40 to 50 years and 2(3.3%) were 30 to 39 years of age, majority participants were females 33(55%) and 27 (45%) were males. Maximum participants 52(86.6%) had no previous knowledge regarding insulin administration while 8(13.33%) had previous knowledge of insulin administration. Maximum score of participants was 59.72% whereas minimum score was 33.72% in relation to precaution to be taken while administering insulin injections, study concluded stating that 15% participants had poor knowledge, 68.33% had average knowledge score while 16.66% had good knowledge. No association was found between knowledge and selected demographic variables. The study concluded stating need for education regarding administration of insulin to patients with type 2 diabetes mellitus for improving their glycemic control.

**Key Words:** Knowledge, Type 2 diabetic participants. Insulin administration

## **INTRODUCTION:**

Diabetes mellitus is slow progressive and degenerative disorder of the pancreas gland that results in decreased secretion of insulin effecting the transport of glucose to different part of the body thereby causing craving for more eating (Polyphagia). The prevalence of non-communicable disease such as type 2 diabetes mellitus is increasing every day putting additional burden on health care system throughout the world and is developing rapidly in India and specially in Goa as per the latest information of ICMR.

Type 2 Diabetic mellitus is a progressive metabolic disorder characterized by increased amount of blood sugar in the blood resulting from defect in insulin secretion, insulin action or both. (American Diabetes Association 2013)

The world wide estimate of the prevalence of diabetes is 171 millions and expected to reach more than 360 million by 2030 (WHO 2012)

Increased blood sugar in the blood stream gives rise to multiple complications related to eyes, brain, kidney, heart and other vital organs of the body. Diabetes occurs in all type of ages, gender, religion ethnicities and socio-economic condition (Hinkle L.J., Cheever H.K., 2014)

This research is aims to study the knowledge of type 2 diabetes patients about administration of insulin in order to prevent complication that could occur secondary to deficient insulin supplement.

## **Objectives of the Study:**

1. To assess the knowledge of type 2 diabetes patients regarding self administration of insulin.
2. To find association between knowledge regarding self administration of insulin and selected demographic variables.

## **METHODOLOGY**

Quantitative survey approach with descriptive survey design was used in the study setting at selected hospital of Goa. Participants were individual diagnosed with type 2 diabetes mellitus on insulin injection in selected hospital of Goa within age group of 30 to 60 years, who were on insulin injection for 10 years. An inclusion criterion was Patient who can read and write English and Konkani and willing to participate in study and attending hospital OPD on regular basis. Sample size was 60 participants selected using Non- probability purposive sampling techniques that were on insulin supplement for at least 10 years. Exclusion criteria were type 2 Diabetic patients who were not on regular insulin and taking oral glycemc control medications. Data was collected using structured knowledge questionnaire on socio-demographic profile and administration of insulin injection that was validated by five experts from the field of medicine and medical surgical nursing. Reliability of tool was tested using reliability coefficient and kuder Richardson formula. The reliability was calculated to be 0.73, and hence the tool was found to be reliable. Formal permission was obtained from the concern authorities and hospital ethical committee Consent form for willingness was obtained from participants after providing relevant information. The pilot study was conducted, at the selected hospital with 10 sample size and study was found to be feasible. The final study was conducted and data was analyzed using descriptive and inferential statistics with SPSS 16 version.

DOI Link:

## RESULTS

The majority of respondents on insulin 34 (56.65%) belonged to > 60 years age, maximum participants were females 33 (55.0%) whereas 27 (45%) were males. The majority of participants 21(35.0%) had completed secondary education and 20(33.30%) were illiterate. Most of the participants were Christians 30(50%). The majority of participants 36(60.0%) had previous family history of type 2 diabetes mellitus. Majority of respondents 41(68.30%) income was below 15000/ month. Regarding previous knowledge on insulin administration majority of participants 52 (86.60%) had poor knowledge score. Association between socio-demographic variable such as religion found significant.

## CONCLUSION

Good knowledge related insulin administration will help to prevent complications such as retinopathy, nephropathy, and cardiovascular complication in patient with type 2 diabetes mellitus.

Health care professional should implement effective interventions to educate patients in early stages of diabetes mellitus so that optimal glycemic control can be achieved and progression of diseases such as diabetes and its complication can be reduced.

More emphasis should be given on diet and life style modification while planning for interventional studies on type 2 diabetes mellitus.

## CONFLICT OF INTREST

No conflict of interest during the study.

## ETHICAL CLEARANCE

Ethical clearance for the study is obtained from the institutional ethical committee.

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