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Knowledge, Attitude and Practice in Diabetic Patients in Amreli

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Abstract

Background: Diabetes mellitus is a rising public health concern in India, especially in rural and semi-urban regions. Poor knowledge, attitudes, and practices (KAP) among diabetic patients contribute significantly to uncontrolled glycemic levels and related complications.

Aims and Objectives: To assess knowledge, attitude and practice among diabetic patients regarding glycemic control and to create awareness to prevent complications and promote healthier outcomes.

Materials and Methodology: A cross-sectional study was conducted among 100 diabetic patients aged 40-70 years attending the medicine OPD of Shantabaa Medical College and General Hospital, Amreli. A semi-structured questionnaire was used to assess sociodemographic details and KAP regarding diabetes. Descriptive statistics were applied.

Results: Among participants, 34% had good knowledge, 38% had a positive

attitude, and 45% had good practice related to diabetes. A significant proportion belonged to low socioeconomic status and had inadequate education, contributing to low awareness. Uncontrolled RBS was seen in 56% of those tested.

Conclusion: The study revealed substantial gaps in awareness and lifestyle adherence among diabetic patients. Targeted educational interventions and continuous follow-up are essential to improve diabetic care in such populations.

Keywords: Diabetes mellitus, Glycemic control, KAP study, Rural health, Patient education

Introduction

Diabetes mellitus is a chronic metabolic disorder characterized by elevated levels of blood glucose resulting from defects in insulin secretion, insulin action, or both. It has emerged as a major public health problem across the world and particularly in developing countries like India where it contributes significantly to morbidity and mortality. The growing burden of diabetes is a serious threat to both public health systems and national economies. According to the International Diabetes Federation (IDF), the global diabetes prevalence in 2021 was estimated at 10.5% (537 million people), and this number is projected to rise to 783 million by 2045 [1]. India is currently home to the second-highest number of individuals living with diabetes globally, estimated at 77 million in 2019, expected to reach over 134 million by 2045 [2]. In Gujarat, urbanization, changing dietary patterns, and sedentary lifestyles have led to a steep rise in diabetes cases, with rural populations also becoming increasingly affected [3,4]. Lack of awareness

about the disease, its complications, and poor adherence to lifestyle and therapeutic modifications among diabetic individuals significantly contribute to poor glycemic control and associated complications such as cardiovascular diseases, nephropathy, retinopathy, and neuropathy [5,6]. Numerous studies conducted globally and in India have emphasized the importance of patient knowledge, attitude, and practices (KAP) as critical components of diabetes management [7,8]. However, rural and semi-urban areas still face challenges such as limited access to education, healthcare infrastructure, and regular follow-up, which hamper effective diabetic control [9-12]. Amreli district in Gujarat is representative of such settings where a high prevalence of diabetes has been observed but with poor awareness levels, especially among lower socio-economic classes. This study was undertaken to assess the level of knowledge, attitude, and practice regarding diabetes among diagnosed diabetic patients attending the Medicine OPD at Shantabaa Medical College and Hospital, Amreli. By identifying the existing gaps, this research aims to support the development of targeted awareness and educational strategies that may improve diabetes control and reduce complications. Such assessments not only help improve individual patient outcomes but also contribute to reducing the long-term burden on the healthcare system [13,14].

Materials and Methodology

This cross-sectional study was conducted from February to June 2022 at the Medicine Outpatient Department (OPD) of Shantabaa Medical College and General Hospital, Amreli. A total of 100 diabetic patients aged 40 to 70 years were selected using simple random sampling. The inclusion criteria

included all known diabetic patients within the specified age group, while those below 40 years or above 70 years, and non-diabetics were excluded from the study.Data was collected using a pre-tested semi-structured questionnaire that included demographic details, clinical history, and questions assessing the knowledge, attitude, and practices related to glycemic control. Knowledge was assessed using six questions focused on causes, symptoms, complications, lifestyle measures, and medication adherence. Attitude and practice were similarly assessed using six questions each. Participants who answered more than 50% of questions correctly were considered to have adequate knowledge, positive attitude, and good practices.Ethical permission was obtained from the institutional head of the department and verbal informed consent was taken from all participants. Data were analyzed using Microsoft Access Version 7 and presented using descriptive statistics including frequency and percentages.

Results

Among the 100 participants, the majority belonged to the age group of 51–55 years, followed by 40–45 years. Females constituted 73% of the study population. Most patients belonged to lower socio-economic classes (Class 3, 4, and 5), with 68% falling in these categories. Regarding residence, 62% were from rural areas, and a large proportion were either illiterate or educated only up to the primary level. A positive family history of diabetes was observed in 41% of patients. Most patients (75%) had diabetes for less than 10 years. RBS levels were available for 74 patients; of these, 56% had uncontrolled sugar levels. Addiction history was present in 38% of patients.

Regarding knowledge, only 34% had adequate knowledge, 38% had a positive attitude, and 45% showed good practices related to diabetes. The proportion of adequate KAP scores was relatively low, correlating with lower education and rural background.

Variable	**Frequency (%)**
Age Group 51-55	24%
Female	73%
Rural Residence	62%
Lower Socio-economic Class (3,4,5)	68%
Illiterate or Primary Education	44% + 38%
Family History of Diabetes	41%
Addiction History	38%
KAP Component	Good Response (%)
Knowledge	34%
Attitude	38%
Practice	45%

Table 1: Sociodemographic Distribution of Study Participants

Component	Question Summary	% Correct Response
Knowledge	Should not forget medicines	30
Knowledge	Need for checkup even if glucose contro	86
Knowledge	Role of exercise in diabetes	73
Knowledge	Modern vs traditional treatment	23
Knowledge	Avoid self-reduction of dose	21
Knowledge	Regular check-up visit	87
Attitude	Know causes of diabetes	45
Attitude	Know symptoms of diabetes	63
Attitude	Know complications of diabetes	35
Attitude	Know hypoglycemia management	50
Attitude	Know effect of exercise	52
Attitude	Know effect of smoking	23
Practice	Take medicine as advised	86
Practice	Follow dietary advice	72
Practice	Do eye and foot care	32
Practice	Perform regular exercise	38
Practice	Control body weight	59
Practice	Avoid extra sugar in diet	52

Table 2: Distribution of Responses to Knowledge, Attitude, and Practice Questions

Conclusion

The study revealed that knowledge, attitude, and practice related to diabetes management were suboptimal in the study population, especially among individuals from lower socio-economic and rural backgrounds. Despite being diagnosed, a significant number of patients lacked awareness about complications and continued unhealthy habits. These results stress the need for focused educational campaigns, regular follow-ups, and structured diabetes education programs to improve patient outcomes and reduce the disease burden.

Limitations and Recommendations

The study was limited to one tertiary care hospital and may not represent the entire district or state. The sample size was modest (n=100), and data were self-reported, introducing a potential for response bias. The study was also cross-sectional, which limits causal interpretation.

Future studies should include a larger, more diverse population across multiple settings. Regular awareness programs, integration of diabetes education into routine care, and use of visual or vernacular educational tools for illiterate populations are strongly recommended. Empowering frontline health workers to reinforce patient education may yield sustainable improvements.

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