

An Analytical Cross-Sectional Study of Knowledge, Attitudes, and Practices about Diabetes Mellitus at a Tertiary Care Hospital

Dr. Shruti Sheelin¹, Dr. Deepak Chinagi^{2*}, Dr. Furqan Chavan³, Dr. Chetan Agasbal⁴, Dr. Nivedita Patil⁵

¹Assistant Professor, Department of General Surgery, Smt. Bangaramma Sajjan Campus, BLDE DU Shri B.M. Patil Medical College, Hospital and Research Centre, Vijayapura-586103, Karnataka, India

²Assistant Professor, Department of General Medicine, Smt. Bangaramma Sajjan Campus, BLDE DU Shri B.M. Patil Medical College, Hospital and Research Centre, Vijayapura-586103, Karnataka, India

³Pharm. D Intern, Department of Clinical Pharmacy, Smt. Bangaramma Sajjan Campus, BLDEA SSM College of Pharmacy, Vijayapura-586103, Karnataka, India

⁴Pharm. D Intern, Department of Clinical Pharmacy, Smt. Bangaramma Sajjan Campus, BLDEA SSM College of Pharmacy, Vijayapura-586103, Karnataka, India

⁵Pharm. D Intern, Department of Clinical Pharmacy, Smt. Bangaramma Sajjan Campus, BLDEA SSM College of Pharmacy, Vijayapura-586103, Karnataka, India

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*Corresponding author: Dr. Deepak Chinagi

Assistant Professor, Department of General Medicine, Smt. Bangaramma Sajjan Campus, BLDE DU Shri B.M. Patil Medical College, Hospital and Research Centre, Vijayapura-586103, Karnataka, India

Abstract

Original Research Article

Introduction: Knowledge, Attitude, as well as Practice (KAP) differences that exist among patients in general contribute significantly to inadequate control of glucose alongside the occurrence of serious complications. Diabetes mellitus, more commonly referred to as T2DM is an important public health issue in India, a place that is occasionally referred to as the "diabetic capital city of the world." The present research study's primary purpose is to analyse KAP with regard to DM among patients who were undergoing standard treatment at a renowned tertiary care facility in the nearby region.

Approach: In a tertiary healthcare institution in North Karnataka, 202 individuals suffering from Diabetes (which included OPD and IPD) enrolled as part of an analytical cross-sectional investigation. In-person interviews were carried out to provide a standardised and structured questionnaire comprising six questions of knowledge, five questions of attitude, and five questions of practice items. A descriptive analysis was performed on the data collected. **Results:** Amongst the 202 participants, 55% were men, and the average age was 58.4±12.6 years. Regarding non-communicable conditions (95%), recognisable symptoms (85%), and becoming obese as an indicator of risk factor (80%), sufficient knowledge was observed. Yet, 35 percent were uncertain about long-term therapy, and 30% said they assumed conventional medicines could permanently cure diabetes. Positive attitudes regarding a nutritious diet (88%), moderate exercise (85%), and also the management of glucose (90%) were all found; despite this, 30% of the participants planned to discontinue taking prescribed medicines whenever their blood glucose levels settled back to the normal range. Just thirty percent of individuals surveyed regularly exercised daily, 70% of them frequently consumed traditional fried foods, whereas thirty percent often forgot to take their prescribed medications. Monitoring frequency exceeded two months in many patients. **Findings:** Proper self-care practices are insufficient, involving negative presumptions related to permanent cure and ultimate treatment termination, although modest knowledge and positive attitudes exist among the participants. To fill this KAP disparity, properly organised and culturally appropriate and standard educational activities are absolutely essential.

Keywords: Diabetes mellitus; Practice; Knowledge; Attitude; KAP; Tertiary care; North Karnataka; Cross-sectional study.

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INTRODUCTION

Diabetes mellitus (DM) is a spectrum of endocrine metabolic disorders associated with alterations in carbohydrate metabolism and elevated blood sugar

levels. It is also associated with concomitant alteration of lipids and protein metabolism, combined altogether result in chronic microvascular, macrovascular, and even neuropathic complications [1]. In the country of India,

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the medical condition has reached essentially epidemic magnitude, and the possibility of consequences results in considerable death and serious illness as well as significant healthcare expenses for families and society collectively [2].

India is referred to as the "diabetes capital city of the world," having roughly 72.96 million adult individuals suffering from the condition. The rate of occurrence among those who are twenty years of age and older ranges from 10.9% to 14.2% in urban settings and between 3% to 7.8% in rural locations, having a much higher proportion among people over 50 [2,3]. Based on data from the International Diabetes Federation (IDF), 537 million individuals worldwide were estimated to suffer from diabetes in 2021, and this estimate is projected to rise to 783 million by 2045 [4]. India, the homeland to approximately 77 million individuals living with diabetes, is second after the nation of China regarding the level of disease burden [5].

Because of growing urbanisation and changes in dietary habits, plus a sedentary way of life, the likelihood of diabetic disorders has been steadily rising in the regional territory. The National Family Health Survey-5 (2023) estimated approximately 10.7% of individuals living in Karnataka are having diabetes [6]. A community-based cross-sectional investigation that included 4,473 individuals living in the city of Belagavi district discovered noteworthy findings on anthropometric and physical parameters associated with risk for type 2 diabetes. [7], emphasising the requirement of periodic screening campaigns in the surrounding region. Furthermore, research carried out in North Karnataka's subtropical region area have demonstrated the multifaceted relationships involving individuals who have type 2 diabetes and diabetic renal disease and also their lifestyle habits, demographic characteristics, and even duration of their illness [8].

Successful diabetic management is dependent not just on prescribed medications but additionally on the patient-oriented self-management practices, and these are significantly impacted by the individual's knowledge regarding the condition, attitudes towards standard therapy, together with every day practices (KAP). In order to accomplish a healthy glycaemic control and prevent complications, self-care approaches that involve medication adherence, dietary modifications, regular physical activity, and periodic monitoring are crucial [9].

Insulin is essential for each of the proper management of type 2 diabetes or type 1 diabetes. Considering this, a significant number of patients fail to adhere to recommended treatment plans. Oral anti-diabetic medicines, injectable insulin therapy, additionally certain lifestyle modifications are required for the proper management and control of diabetes mellitus [2]. Prolonged insulin administration period is reportedly associated with better attitudes and also

overall KAP scores, as indicated by study findings, emphasising the necessity of structured, tailored educational instruction, especially during early diabetic introduction phases [5].

KAP variations amongst patients with diabetes have already been documented in a number of research studies carried out in different regions of India. people with type 2 diabetes had substantial knowledge and attitudes regarding diabetic retinopathy, although they had comparatively poor eye-care practices, based on a study conducted at tertiary care in eastern India [10]. Domestic-based problems including a not having adequate family support as well as accessible transportation constituted among the most common challenges to adherence to prescribed medication Similar findings were observed in the city of Bangalore, where participants had substantial knowledge (49.58%) but merely a moderate attitude (58.67%) with practice (47.5%). Furthermore, there was little correlation between attitude and practice ($p=0.048$), whereas there was a somewhat modest but significant correlation between knowledge and practice ($p=0.349$) and knowledge and attitude ($p=0.181$) [6].

In a research study conducted at a tertiary care hospital in Hubballi, North Karnataka, 300 patients with diabetes got their knowledge, attitudes, and practices evaluated, had found that the majority of these individuals exhibited excellent KAP across the various demographic areas. Individuals having this condition spanning more than five years had higher levels of knowledge (72.51%), positive attitude (75.69%), as well as standard of practice (64.06%) than those having a disease duration of less than five years, as demonstrated by the analysis of proficient literate individuals surveyed, which additionally demonstrated far better KAP scores [2].

Self-care routines in rural areas of Karnataka were identified to be not satisfactory, with only 24.5% of individuals attaining adequate glucose control and 68.3% compliance to prescribed medication [11]. Age over 50 and declared overweight had a significant association with poor glycaemic regulation. Just sixteen percent of diabetic individual's maintained minimum four self-care habits, including a surprising 88% were unaware of the risks related to diabetic conditions, as reported with the multidisciplinary research from Andhra Pradesh. Inadequate practices for self-care were found to be considerably associated with "a lack of healthcare information," "insufficiently educated medical services," and "absence of family support," according to the qualitative comparisons [12].

Several recent studies on diabetic disease epidemiology as well as associated risk factors have placed an emphasis on the region of North Karnataka, a geographical region with unique sociocultural, nutritional, and economic factors [7, 8]. However, there

are still a fewer comprehensive KAP assessments performed in this area. Progressive consequences (such as diabetic foot ulcers, coronary artery disease, and retinopathy) occur frequently amongst patients in this geographic area's tertiary care institutions, suggesting delayed evaluation and suboptimal self-management. For the purpose of identifying particular gaps that could potentially be addressed in future educational programs. The goal of this study had been to assess the people with diabetes (DM) for their knowledge, attitudes, and practices among both inpatient (IPD) and outpatient (OPD) participants receiving conventional medical care at a tertiary healthcare centre in North Karnataka.

AIMS AND OBJECTIVES

1. To assess the level of knowledge regarding diabetes mellitus among study participants.
2. To evaluate the attitude of patients toward diabetes management.
3. To describe the self-care practices followed by diabetic patients.
4. To identify the knowledge-attitude-practice gaps in this population.

MATERIALS AND METHODS

Study Design and Setting

A tertiary healthcare educational institution in North Karnataka, India, became the site of this analytical cross-sectional study, over the period of four months, which was between December 2024 and June 2025. A combined urban and rural population across multiple neighbouring districts, encompassing Vijayapura along with the surrounding regions, is served by the hospital.

Study Population

Patients across both OPD as well as IPD who were identified as having Type 2 diabetes mellitus spanning a minimum of a period of three months were enrolled in the present research. Participants from both the General Medicine and then General Surgery departments were chosen and followed up.

Inclusion criteria:

- At least 18 years of age old
- Type 2 diabetes (according to medical records)
- Willing to provide informed consent
- Clinically stable (for IPD patients)

Exclusion criteria:

- Patients with psychiatric illness or cognitive impairment preventing interview
- Critically ill or unconscious patients
- Pregnant women (gestational diabetes)

Sample Size

The minimum number needed for appropriate sample size (n=150), that was estimated using the technique for cross-sectional analysis considering 50% anticipated KAP adequateness, with a 8% margin of

error and a 95% confidence level, was achieved by the 202 participants who were included based on progressive sampling until the study period was completed.

Data Collection Tool

In accordance with validated questionnaires from previous Indian study designs, a systematic KAP questionnaire was developed and adapted to suit the regional context [2,9]. There were four separate sections to the questionnaire:

- **Section A:** Demographic and clinical details (age, gender, OPD/IPD number, duration of diabetes, comorbidities)
- **Section B:** Knowledge (6 items – K1 to K6) – response options: YES / NO / DONT KNOW / MAY BE
- **Section C:** Attitude (5 items – A1 to A5) – response options: YES / NO / DONT KNOW / MAY BE
- **Section D:** Practice (5 items – P1 to P5) – multiple choice frequency options

To ensure precision, the questionnaire was initially written in English, subsequently translated directly into Kannada, the native tongue, and ultimately reviewed by a language expert.

Data Collection Procedure

Experienced clinicians carried out personal interviews in an exclusive area, such as an OPD consultation office or a hospital bed side. Between ten and fifteen minutes were reserved for every interview. With institutional approval, clinical information (OPD/IPD number, comorbidities, diabetes duration) had been extracted from electronic health records.

Statistical Analysis

Microsoft Excel was employed to process the data, while SPSS version 25.0 (IBM Corp., Armonk, NY, USA) was utilised for analysis. For the sake of every single KAP question and demographic variables, descriptive statistical data (frequencies, percentages, means, and standard deviations) were calculated. As a result of this primarily descriptive study, no inferential statistics were used.

Ethical Considerations

Institutional Ethics Committee authorisation was obtained. Each participant provided written informed consent. Strict confidentiality and anonymity was ensured; the final dataset had no identifiable data other than the corresponding OPD/IPD registration for clinical correlation.

RESULTS

Demographic and Clinical Profile

There were 202 diabetic patients overall. The average age range was 28 to 97 years, having a mean of 58.4 ± 12.6 years. The population was 44.6% (n=90)

females and 55.4% (n=112) males. In regard to hospitalisation status, 35% comprised IPD patients and 65% were OPD patients.

Diabetes duration:

- Less than a year: 18 percent
- 1–5 years: 32 percent
- 6–10 years: 28 percent
- Ten years: 22 percent (up to sixty years)

Comorbidities:

Hypertension (HTN) was the most frequently occurring comorbidity (48%), next to diabetic foot ulcer (22%), ischemic heart disease (15%), cellulitis/abscess (10%), and chronic kidney disease (5%). Several comorbidities were identified in these instances.

Knowledge Regarding Diabetes Mellitus (K1–K6)

Knowledge responses are summarised in Table 1.

Item	Question	Correct Response	% Correct
K1	Can medicines completely cure diabetes?	NO	70%
K2	Should diabetes medicines be taken lifelong?	YES	65%
K3	Does overweight/obesity increase diabetes risk?	YES	80%
K4	Is diabetes a communicable disease?	NO	95%
K5	Is family history a risk factor?	YES	75%
K6	Are frequent urination, hunger, and thirst symptoms?	YES	85%

Key observations:

- Good awareness about non-communicability (95%).
- Moderate awareness about lifelong treatment (65%) and incurability (70%).
- 30% still believe in curative medicines—a serious misconception.
- 25% do not recognize family history as a risk factor.

Attitude Toward Diabetes Management (A1–A5)

Item	Question	Positive Attitude	%
A1	Is blood glucose control necessary for better life?	YES	90%
A2	Is regular exercise appropriate?	YES	85%
A3	Is controlled diet necessary?	YES	88%
A4	Is maintaining healthy weight important?	YES	85%
A5	Can medicines be discontinued when glucose normalizes?	NO (correct)	70%

Interpretation:

Although attitudes regarding lifestyle modifications are quite positive, 30% of individuals would mistakenly discontinue their medications when blood sugar levels returned to normal. This unsafe

attitude stands contrary to the notion that diabetes is a chronic condition that needs to be managed for the remainder of their lives [9].

Self-Care Practices (P1–P5)

Item	Practice	Most Common Response	%
P1	Visit physician for glucose check	Once a month / >2 month	65%
P2	Forget medication	Never (70%); 5–6 times/month (20%)	30% forget occasionally
P3	Exercise in last week	Never (40%); 3–4 times/week (30%)	Only 30% exercise regularly
P4	Average exercise time/day	<30 minutes (55%)	Only 15% do >60 minutes
P5	Eat deep-fried food	3–6 times/month (45%); >6 times/month (25%)	70% consume fried food regularly

Summary of practices:

- **Poor:** Exercise frequency/duration and dietary habits.
- **Moderate:** Medication forgetting (30% admit occasional forgetting).
- **Suboptimal:** Visit intervals are too long for many patients.

exercised, and 70% frequently ate fried foods, although 85–90% of participants expressed favourable views toward diet and exercise. Furthermore, although 70% of respondents accurately said that diabetes cannot be completely treated, 30% would still discontinue medication once their blood glucose levels returned to normal. This confirms a significant KAP gap in this population, which has been previously reported in the management of chronic diseases [6,9,12].

Knowledge-Attitude-Practice Gap

This investigation yielded a startling conclusion: only thirty percent of individuals routinely

DISCUSSION

General Interpretation

One of the first comprehensive KAP assessments of patients with diabetes from North Karnataka is reported in this paper. The findings show an anomaly: poor self-care habits and enduring harmful ideas coexist with reasonably good knowledge and overwhelmingly favourable views. Whilst this KAP variation is widely reported in the literature on chronic diseases, it is particularly evident in this mixed rural-urban population.

Knowledge: Strengths and Deficits

Strengths:

Effective fundamental public health messaging is demonstrated by the high correct response rate for symptoms (85%) and non-communicability (95%). This is in line with findings from a research conducted through a tertiary care hospital in Hubballi, North Karnataka, wherein most study participants showed improved KAP across all groups of people [2].

Deficits:

It's worrisome that 30% of people think medicines could treat diabetes. The same results have also been reported across India, indicating that this misconception is not limited to our study. Based on a study carried out in Andhra Pradesh, patients continue to have misconceptions about controlling their diabetes condition, believing that cutting back on food and avoiding sweets will make prescribed medications unwarranted [12]. The misunderstanding of temporary normoglycemia as a "cure" and the absence of reinforcement during quick OPD treatment sessions are typical causes of this misconception [9]. In a comparable manner, 35% of patients are uncertain about lifelong treatment, suggesting that many perceive diabetes as an acute illness. Such cognitive fallacy directly results in non-adherence to treatment.

Endocrinologists highlight that diabetes cannot be cured, but it can go into remission, but it might recur afterwards. Type 1 diabetes, being an autoimmune condition, requires lifelong insulin. Even in type 2 diabetes, while remission is possible in early stages with lifestyle modifications, the disease cannot be "cured" in the traditional sense [13]. The notion that a chronic illness such as diabetes can be cured in a short period lacks solid scientific evidence and has been deemed deceptive by Indian medical experts [13].

Attitude: Positive but Fragile

The overwhelmingly positive attitudes (85–90%) toward glucose control, diet, and exercise are higher than expected for this setting. Possible explanations include: (1) tertiary care effect—patients have witnessed advanced complications in fellow patients, creating fear-driven motivation; (2) repeated hospital exposure—IPD patients receive daily nursing

and physician reinforcement; and (3) family influence—many are accompanied by younger, educated relatives.

But a major concern is that 30% of people would stop taking medications once their blood sugar levels returned to normal. This mindset is indicative of a common misconception that diabetes is a metabolic memory disease and a deep-seated desire for a cure. Knowledge had a poor link with attitude ($r=0.181$) and practice ($r=0.349$), but there was no correlation between attitude and practice ($r=0.048$), similar to a Bangalore study [6]. This indicates that favourable attitudes do not always translate into improved practices. This result aligns with our findings.

Studies on the length of insulin therapy have revealed that patients who are just starting insulin frequently have higher resistance and poorer self-management abilities, which may eventually improve with experience, education, and interactions with healthcare providers [5]. This implies that with ongoing instruction and assistance, attitude development is achievable.

Practice: The Weakest Domain

Our practice findings are worse than many Indian studies. In our study:

- **Exercise:**

Just 30% of people regularly exercise. This is in line with research from rural Karnataka, which revealed that only 26.6% of diabetic patients exercised at least three times a week [11]. The lack of safe walking areas in rural and semi-urban North Karnataka, the cultural notion that "exercise is not for elders," and agricultural and physical labour being interpreted incorrectly for cardiovascular exercise could all contribute to the low exercise rates.

- **Eating habits:**

70% of people eat fried food a minimum of three to six times a month. Given the importance of deep-fried foods in regional cuisine, this is a habitual eating habit as opposed to an occasional indulgence. Although 40% of Andhra Pradesh residents exhibited good eating habits, this was still insufficient for the best possible care of diabetes [12].

- **Medication adherence:**

In comparison with comparable research where medication non-adherence varies from 40–60%, 30% of participants frequently forget to take their medications [11]. However, a mixed-methods study's qualitative findings showed that problems with drug accessibility and availability have a big impact on adherence. Patients frequently reported about having trouble getting combination drugs, which made them increasingly reliant on private physicians and unhappy with public health care [12].

• Frequency of monitoring:

Many people only attend once every two months or more, which is inadequate for HbA1c monitoring (which is advised every three months, or more frequently if uncontrolled). According to a study carried out in Andhra Pradesh, 52% of patients monitored their blood glucose levels once every three months, compared to 20% who did so only infrequently. Moreover, 88% of patients were not aware that diabetes can result in consequences such skin infections, neuropathy, and eye difficulties [12].

• Awareness of complications:

While awareness of problems was not particularly measured in our study, the available literature from similar scenarios suggests that there is a substantial gap. Only 44.44% of participants in a study from eastern India understood that diabetic retinopathy could result in blindness if treatment is not received, and only 20.63% knew that persons with the condition can also have normal vision [10].

Factors Influencing Self-Care Practices

Knowledge alone can frequently be insufficient to alter health-related behaviour, according to recent data from behavioural studies with a DM focus. Research on

T2DM patients' self-care shows awareness only results in significant action when it is accompanied by individualised counselling and continuous supervision [11,12]. Three key concepts impacting inadequate self-care habits were found in qualitative research from Andhra Pradesh [12]:

1. **Limited patient knowledge:** Insufficient understanding of self-care practices, such as problems, dietary restrictions, and the significance of exercise.
2. **Uninformed healthcare services:** Patients received insufficient counsel from healthcare professionals who prioritised medicine and lacked thorough understanding of nutritional control.
3. **Lack of behavioural support:** Problems with medication accessibility, price, and availability together with a lack of family participation in diabetes care.

These findings highlight that addressing the KAP gap requires a holistic approach that goes beyond simple information dissemination.

Comparison with National and International Literature

Parameter	Present Study (N. Karnataka)	Hubballi Study (2023) [2]	Bangalore Study (2024) [6]	National/Global
Know diabetes incurable	70%	Not reported	Not reported	65-75%
Positive attitude to diet/exercise	85-90%	48% (overall attitude)	58.67% (moderate attitude)	Variable
Regular exercise practice	30%	Not reported	Not reported	40-50%
Adequate self-care practices	16% (by inference)	51% (practice)	47.5% (moderate)	Variable
Medication adherence	70% never forget	68.3% [11]	73.3% [12]	60-80%

Our participants have better attitudes but worse practices than some national averages—a unique pattern suggesting that motivation alone is insufficient without an enabling environment. The Hubballi study reported that subjects with disease duration >5 years had better knowledge (72.51%), attitude (75.69%), and practice (64.06%) compared to those with disease duration <5 years (27.48%, 24.3%, and 35.95%, respectively) [2]. This duration-dependent improvement was not strongly observed in our study, possibly due to differences in patient education approaches.

Why Does the KAP Gap Persist in This Population?

Based on our findings and previous literature [2,6,9,12], we propose a multi-level model:

1. **Patient level:** Low health literacy (distinct from formal education), competing priorities (daily wage work leaves no time/energy for exercise), and the perception that "feeling fine" means diabetes is controlled. Education level has been consistently shown to be positively associated with knowledge and practice scores [6].

2. **Family and community level:** Family meals are carbohydrate- and oil-heavy; a separate "diabetic diet" is stigmatized. Walking for exercise is seen as "loitering" or "having no work." Family support is crucial; a family-centred training approach has been shown to improve self-care practices among DM patients [11].
3. **Health system level:** OPD consultations average less than five minutes—insufficient for behaviour change counselling. The majority of hospitals in North Karnataka lack a formal diabetes education program. It has been discovered that ASHA employees, who interact directly with the community, have a limited awareness of diabetes and self-care and are unable to address patient issues and misconceptions. This underscores the need for training to deliver effective behavioural change communication [12].

Clinical and Public Health Implications

1. Formal diabetes teaching must be implemented at tertiary care hospitals; medication delivery is not enough. According to several studies

- [2,9,12], a committed diabetes educator (nurse or certified counsellor) can close the KAP gap.
2. Myths must be openly addressed in educational materials, such as "Diabetes is like high blood pressure—controlled, not cured." It is important to expressly refute the myth that cutting back on food and avoiding sweets removes the need for medicine [12,13].
 3. Useful dietary suggestions, such as "replace samosa with roasted chana; replace puri with chapati," rather than "avoid all fat."
 4. The prescription for exercise is "walk to the corner shop and back, then increase daily," not "walk 30 minutes."
 5. Family-based intervention: teach the patient's companion and cook. It has been demonstrated that family-centred training greatly enhances self-care behaviours [11].
 6. Monitoring reminders to increase the frequency of visits—by phone or text.
 7. Training for community health workers: In order to successfully impart knowledge to patients, ASHA employees require systematic training on diabetes and self-care [12].

STRENGTHS AND LIMITATIONS

Strengths:

- First detailed KAP study from North Karnataka tertiary care setting
- Large sample (n=202) including both OPD and IPD patients
- Use of a validated, culturally adapted tool [2]
- Real-world population with complications—high generalizability to similar settings

Limitations:

- A single-center design might not accurately reflect the whole area.
- Self-reported behaviours: underreporting of poor nutrition and medicine skipping is likely due to social desirability bias.
- No objective verification (e.g., HbA1c correlated with KAP)
- Cross-sectional design—cannot assess change over time or causality
- "MAY BE" and "DONT KNOW" responses reflect uncertainty but were not explored qualitatively
- Obesity was assessed based on self-reporting rather than objective anthropometric measurements in some comparisons [11]

FUTURE RESEARCH DIRECTIONS

- **Mixed-methods study:** Add focus group discussions to understand why patients continue poor practices despite good knowledge [12].
- **Interventional trial:** Test a six-month, culturally tailored diabetes education package with pre-post KAP and HbA1c assessment.

- **Multicentre study:** Cover North Karnataka districts (Bagalkot, Vijayapura, Gadag, Dharwad, Belagavi) [7,8].
- **Economic analysis:** Cost-effectiveness of structured diabetes education in tertiary care settings.
- **Longitudinal study:** Assess how KAP evolves with disease duration and repeated educational interventions [2,5].

CONCLUSION

1. The following findings were obtained from analytical cross-sectional research of 202 diabetic patients (OPD and IPD) at a tertiary care hospital in North Karnataka:
2. Knowledge is moderate: Although there is a good grasp of obesity risk, non-communicability, and symptoms, 30% of people still think that medications may cure diabetes, and 35% are unsure about lifelong therapy.
3. The attitude is unexpectedly positive, with more than 85% supporting the significance of food, exercise, glucose control, and weight management. However, 30% would stop taking medications once their blood glucose levels returned to normal—a risky mindset.
4. The weakest area is practice: just 30% of people routinely exercise, 70% eat deep-fried foods, 30% occasionally forget to take their medications, and monitoring visits are commonly postponed past the suggested intervals. Concerningly, there is still a lack of knowledge on diabetic complications, which is in line with results from other Indian studies [10,12].
5. Positive attitudes do not translate into the best self-care practices; there is a significant knowledge-attitude-practice gap. Patient-level factors (health literacy, conflicting priorities), family/community factors (dietary norms, lack of support), and health system factors (short consultations, lack of formal teaching) all have an impact on this disparity [2,6,9,12].

Final Message

Diabetic patients in North Karnataka are aware of what is morally right and wish to act morally, but they lack the environmental support, constant reinforcement, and practical skills necessary to put their knowledge into practice. Targeted educational efforts are necessary to address the pervasive misunderstanding that diabetes may be "cured" and that medication can be discontinued after blood sugar levels return to normal [13].

In order to close this gap, information-giving must give way to behaviour-enabling strategies, such as family-inclusive education, food recommendations that are culturally appropriate, straightforward exercise regimens, and dispelling myths regarding cure and long-term treatment. Involving families in the management of

diabetes and training community health workers (ASHAs) to provide effective behavioural change communication are crucial tactics [11,12].

Even the best tertiary care won't be able to stop the catastrophic consequences of diabetes in this high-risk group without such measures.

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