

Original Research Article

Awareness, practices and treatment seeking behavior of type 2 diabetes mellitus patients in Shimla

Manish Kumar Thakur^{1*}, Amit Sachdeva², Abhinandan Sood¹, Bhagwan Dass Negi¹,
Komal Ahire¹, Sanya Prem Macchan¹, Anand Vishal³, Jitender Rana⁴

¹Department of Endocrinology, AIMSS, Shimla, Himachal Pradesh, India

²Department of Community Medicine, IGMCI, Shimla, Himachal Pradesh, India

³Department of Medicine, RML, Delhi, India

⁴Department of Cardiology, AIMSS, Shimla, Himachal Pradesh, India

Received: 30 April 2025

Revised: 23 May 2025

Accepted: 26 May 2025

*Correspondence:

Dr. Manish Kumar Thakur,

E-mail: mtmanishthakur42@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: Type 2 diabetes mellitus (T2DM) is a growing global health issue, with its management and outcomes influenced by socio-demographic factors, healthcare access, and diabetes-related knowledge. These factors vary between rural and urban populations, leading to disparities in disease progression and complications. This study explores the awareness, practices, and treatment-seeking behaviors of T2DM patients in Shimla, focusing on the differences between rural and urban populations.

Methods: A cross-sectional study was conducted at Atal institute of medical super-specialities Shimla with 100 participants diagnosed with T2DM, consisting of 50 rural and 50 urban individuals. Data were collected through structured interviews and medical record reviews. Variables assessed included socio-demographic factors (age, gender, education, family structure), clinical characteristics (BMI, smoking habits), diabetes knowledge (symptoms, complications), and treatment-seeking behaviors. Statistical analysis was performed using chi-square and independent t tests, with a significance level of $p < 0.05$.

Results: The results revealed significant differences between rural and urban populations. Urban participants had better diabetes-related knowledge, particularly recognizing symptoms such as unexplained weight loss (28.9% vs. 14.5%, $p = 0.04$) and complications like kidney damage (64.4% vs. 34.5%, $p = 0.001$). Urban participants were more likely to seek treatment due to complications (13.3% vs. 3.6%, $p = 0.04$), while rural participants were more likely to seek care due to fear of complications (50.9% vs. 37.8%, $p = 0.09$).

Conclusions: This study underscores the need for targeted diabetes education and healthcare interventions, particularly in rural areas, to improve disease management and reduce fear-based treatment-seeking. Addressing these disparities will help both rural and urban populations better manage T2DM.

Keywords: Type 2 diabetes mellitus, Rural-urban differences, Awareness and treatment

INTRODUCTION

Diabetes mellitus (DM) is a global health epidemic with a rapidly increasing prevalence, particularly in low- and middle-income countries. The condition is a leading cause of morbidity and mortality, primarily due to its

complications, which affect multiple organ systems and reduce the quality of life for those affected.¹ Effective management of diabetes involves not only medical treatment but also addressing socio-demographic, clinical, and knowledge-based factors that vary across populations. These factors play a crucial role in the

management of diabetes and its complications, influencing patient outcomes significantly.²

Rural and urban populations often face different challenges when managing chronic diseases like diabetes. In rural areas, limited healthcare access, lower health literacy, and socio-economic factors may contribute to delayed diagnoses, poor adherence to treatment protocols, and insufficient management of complications.³ Conversely, urban populations generally have better access to healthcare services but may experience other challenges, such as a higher prevalence of sedentary lifestyles, poor dietary habits, and higher rates of comorbidities like hypertension and obesity, which can exacerbate diabetes.⁴ Despite these differences, there is a scarcity of research comparing the two populations in terms of clinical characteristics, knowledge of diabetes management, and the reasons for seeking medical care.

Family structure, educational status, and knowledge of disease management are crucial factors that may also vary across rural and urban populations and impact diabetes outcomes. Studies have shown that family dynamics, such as living in joint families, can influence health behaviors, providing either additional support or posing challenges to health management.⁵ Moreover, understanding of drug therapy and diabetes-related complications is essential for improving disease control, yet there are significant gaps in knowledge across different populations, which can hinder effective treatment and management.⁶

This study seeks to address these gaps by comparing socio-demographic characteristics, clinical features, and the knowledge of diabetes management between rural and urban populations. By examining factors such as age, gender, family status, body mass index (BMI), smoking habits, clinical symptoms, and the reasons for seeking medical treatment, we aim to highlight the specific needs and challenges faced by both rural and urban diabetic patients. The findings will contribute to the development of targeted healthcare interventions that are sensitive to unique needs of these populations, ultimately improving diabetes care and outcomes across diverse settings.

METHODS

Study design, setting, and participants

This cross-sectional study was conducted at Atal institute of medical super-specialties Shimla over a period of 6 months, from June 2024 to December 2024, and followed up four months after the initial screening. A total of 100 adult patients with T2DM were included in the study. The sample size was calculated based on the prevalence of diabetes recorded in a multicentric study (3.1% for rural and 7.3% for urban populations).¹⁵

All participants were initially diagnosed during a OPD visit based on fasting and postprandial blood glucose tests, as described elsewhere in the study.¹³ Following

this, the patients were traced again after a period of 4 months in the respective urban and rural areas. During this follow-up, the patients were interviewed to collect data on various aspects related to diabetes, including their knowledge, practices, and health-seeking behaviors related to the management of diabetes and its complications.

Study tool

A pre-tested, pre-designed, semi-structured questionnaire was used to collect data from the participants. The questionnaire, administered in the local language, consisted of several sections to gather information on the demographic profile (age, sex, religion, marital status, education, occupation, etc.), as well as participants knowledge regarding diabetes (its causes, types, symptoms, and complications), and their management practices, including exercise and dietary modifications. Additionally, questionnaire assessed participants' health-seeking behaviors related to diabetes, including their adherence to medication, reasons for non-compliance, and awareness of potential complications of diabetes.

The questionnaire was pilot-tested in a different setting among diabetic patients to assess its feasibility and reliability. Cronbach's alpha for the reliability of the questionnaire was calculated to be 0.82, indicating good internal consistency. Expert opinions were sought on the validity of each item, and all items were rated as excellent in terms of construct and meaning. Furthermore, data on out-of-pocket expenses incurred by patients for diabetes treatment were also collected. The average duration of each interview was approximately 10-15 minutes.

Inclusion and exclusion criteria

All adult patients (18 years and older) who were diagnosed with T2DM during the screening were included in the study. No patient refused to participate, and none were deemed too ill to complete the interview.

Statistical analysis

The data were analyzed using SPSS software (version 17, Chicago II, USA). Descriptive statistics such as averages and proportions were used to summarize the data. Differences in proportions between groups were assessed using the Chi-square or Fisher test, and differences in means were assessed using the Mann-Whitney test for non-normal distribution. A significance level of <5% was considered statistically significant.

RESULTS

Demographic details

The demographic characteristics of the study participants revealed some interesting trends between the rural and urban populations. The mean age of rural participants was

54.4±15.7 years, while the urban participants had a slightly higher mean age of 57.4±10.5 years, but this difference was not statistically significant ($p=0.2$). Gender distribution was also similar, with 60% of rural participants and 53.3% of urban participants being male, which did not show a significant difference ($p=0.25$) (Table 1).

Educationally, 56.3% of rural participants had higher education, while 71.1% of urban participants had achieved the same, although this difference was marginally significant ($p=0.06$). A notable difference was observed in family structure; a higher percentage of rural participants (58.2%) lived in joint families compared to urban participants (37.8%), with this difference being statistically significant ($p=0.02$).

In terms of BMI, rural participants had a mean BMI of 27.0±3.4, while urban participants had a slightly lower mean BMI of 26.1±4.4, but this was not statistically significant ($p=0.25$). The duration of diabetes among rural participants was 7.4±5.7 years, and among urban participants, it was 7.1±6.8 years, showing no significant difference ($p=0.83$).

Family history of diabetes was similar in both groups (52.7% in rural vs. 48.9% in urban), with no significant difference ($p=0.35$). Smoking and alcohol status were also similar in both rural and urban populations, with no significant differences observed in these variables ($p=0.28$ and $p=0.46$, respectively).

Regarding hypertension, 27.2% of rural participants and 28.8% of urban participants had hypertension, with no significant difference ($p=0.42$). Lastly, the occupational status was also similar, with 49.0% of rural participants and 53.3% of urban participants employed ($p=0.33$).

Knowledge of T2DM and its complications

In terms of knowledge of clinical features of diabetes, rural participants were more likely to report being

asymptomatic (25.4%) compared to urban participants (15.6%), but the difference was not statistically significant ($p=0.11$). Regarding common clinical features of diabetes, 45.4% of rural participants and 51.1% of urban participants reported frequent urination, with no significant difference ($p=0.29$). Urban participants were more likely to report unexplained weight loss (28.9%) compared to rural participants (14.5%), and this difference was statistically significant ($p=0.04$) (Table 2).

Other symptoms, such as extreme hunger, increased thirst, fatigue, irritability, blurred vision, and recurrent infections, showed no significant differences between rural and urban participants. However, a higher proportion of rural participants (14.5%) reported that they didn't know about certain clinical features compared to only 4.4% of urban participants ($p=0.05$).

Regarding knowledge of drug therapy in diabetes, there were no significant differences between rural and urban participants. For instance, 36.3% of rural participants and 42.2% of urban participants believed that drugs should be stopped once diabetes is controlled ($p=0.27$). A larger proportion of rural participants (41.8%) compared to urban participants (31.1%) thought that drugs are more important than diet control, though this was not statistically significant ($p=0.14$).

Knowledge of diabetes complications was generally similar in both groups. Both rural and urban participants showed similar levels of knowledge about cardiovascular diseases and nerve damage, with no significant differences ($p=0.30$ and $p=0.47$, respectively).

However, a significant difference was observed for knowledge of kidney damage, where 64.4% of urban participants were aware of kidney damage as a complication of diabetes, compared to only 34.5% of rural participants ($p=0.001$). On the other hand, rural participants had a significantly higher awareness of digestion issue (12.7%) compared to urban participants (2.2%) ($p=0.03$).

Table 1: Baseline characteristics of the study participants.

Variables	Rural, N (%)	Urban, N (%)	P value
Age (in years)	54.4±15.7	57.4±10.5	0.2
Gender (Male)	33 (60)	24 (53.3)	0.25
Education (higher)	31 (56.3)	32 (71.1)	0.06
Family status (joint)	32 (58.2)	17 (37.8)	0.02
BMI	27.0±3.4	26.1±4.4	0.25
Duration of diabetes (in years)	7.4±5.7	7.1±6.8	0.83
Family history of diabetes mellitus	29 (52.7)	22 (48.9)	0.35
Smoking status	7 (12.7)	4 (8.8)	0.28
Alcohol status	7 (12.7)	6 (13.3)	0.46
HTN	15 (27.2)	13 (28.8)	0.42
Occupation	27 (49.0)	24 (53.3)	0.33

Table 2: Knowledge of clinical features, drug therapy and complications of diabetes.

Variables	Rural, N (%)	Urban, N (%)	P value
Asymptomatic	14 (25.4)	7 (15.6)	0.11
Frequent urination	25 (45.4)	23 (51.1)	0.29
Unexplained Weight loss	8 (14.5)	13 (28.9)	0.04
Extreme hunger	5 (9.0)	5 (11.1)	0.37
Increased thirst	19 (34.5)	17 (37.8)	0.3
Fatigue	15 (27.3)	15 (33.3)	0.25
Irritability	2 (3.6)	1 (2.2)	0.36
Blurred vision	3 (5.4)	2 (4.4)	0.42
Recurrent infections	4 (7.3)	5 (11.1)	0.26
Don't know	8 (14.5)	2 (4.4)	0.05
Knowledge of drug therapy in diabetes			
Once DM is controlled drugs should be stopped	20 (36.3)	19 (42.2)	0.27
Drug is more important than diet control	23 (41.8)	14 (31.1)	0.14
Insulin is to be avoided as far as possible	1 (1.8)	1 (2.2)	0.45
Insulin is habit forming	2 (3.6)	2 (4.4)	0.42
Regular medicine only can cure DM	2 (3.6)	5 (11.1)	0.08
Medicine plus lifestyle changes can only cure DM	1 (1.8)	2 (4.4)	0.25
Don't know	11 (20.0)	8 (17.8)	0.39
Knowledge of complications of diabetes			
Cardiovascular diseases	18 (32.7)	17 (37.8)	0.30
Nerve damage	12 (21.8)	10 (22.2)	0.47
Digestion issue	7 (12.7)	1 (2.2)	0.03
Erectile dysfunction	2 (3.6)	1 (2.2)	0.36
Kidney damage	19 (34.5)	29 (64.4)	0.001
Eye damage	27 (49.0)	25 (55.5)	0.26
Foot Damage	10 (18.2)	5 (11.1)	0.17
hearing impairment	4 (7.2)	1 (2.2)	0.14
Depression	0	1 (2.2)	0.2
Don't know	12 (21.8)	5 (11.1)	0.08

Treatment-seeking behavior

Regarding reasons for seeking treatment, both rural and urban participants showed similar responses for most reasons. A comparable proportion of rural (32.7%) and urban (33.3%) participants sought treatment due to the severity of their symptoms ($p=0.47$). However, a significant difference was observed in seeking treatment due to complications, with a higher percentage of urban participants (13.3%) seeking treatment after complications occurred, compared to only 3.6% of rural participants ($p=0.04$).

Fear of complications was another common reason for seeking treatment, with 50.9% of rural participants and 37.8% of urban participants citing it, though this difference was not statistically significant ($p=0.09$). Health IEC activities influenced treatment-seeking behavior for a small percentage of participants, with 5.4% of rural participants and 2.2% of urban participants citing this factor ($p=0.23$). Lastly, advice from friends or relatives had a similar effect on treatment-seeking behavior, with 27.3% of rural participants and 26.7% of urban participants seeking treatment based on such advice ($p=0.47$).

These results suggest that there are notable differences in the knowledge and treatment-seeking behaviors between rural and urban populations, which could inform targeted interventions to improve diabetes awareness and management in both settings.

Table 3: Reason for seeking treatment.

Variables	Rural, N (%)	Urban, N (%)	P value
Severity of symptoms	18 (32.7)	15 (33.3)	0.47
Complication occurred	2 (3.6)	6 (13.3)	0.04
Health IEC activity	3 (5.4)	1 (2.2)	0.23
Fear of complications	28 (50.9)	17 (37.8)	0.09
Advice from friend or relative	15 (27.3)	12 (26.7)	0.47

DISCUSSION

Demographic details

The demographic characteristics of participants in our study revealed key distinctions between rural and urban

populations with T2DM. We found that the mean age of individuals in urban areas was slightly higher (57.4 ± 10.5 years) than those in rural areas (54.4 ± 15.7 years), although the difference was not statistically significant ($p=0.2$). This finding mirrors trends seen globally where urban populations tend to age slower due to enhanced healthcare access. Research by Patel et al has pointed out that urban populations typically benefit from better healthcare infrastructure, which may contribute to the higher life expectancy often observed in these populations.⁷ Furthermore, the relatively similar mean age in both groups may suggest that the aging population in rural India is becoming more significant due to urbanization and migration patterns.

Regarding gender distribution, there was no significant difference in the proportion of males between rural (60%) and urban (53.3%) groups ($p=0.25$), which is consistent with previous studies that have shown no significant difference in gender-based diabetes prevalence. This suggests that gender does not serve as a major determinant of diabetes in either rural or urban areas. However, studies such as that by Dey et al suggest that males in rural areas may experience a delayed diagnosis due to cultural factors and less healthcare engagement.⁸

Education levels were found to be higher in the urban population (71.1% vs. 56.3%) ($p=0.06$), reflecting the well-established fact that rural populations generally have lower educational attainment. This finding is corroborated by the work of Sharma et al which reported that the rural-urban education gap in India influences health literacy and, by extension, chronic disease management, particularly diabetes.⁹ A higher educational level often translates into better disease management as individuals are more likely to understand the importance of regular check-ups, medication adherence, and lifestyle changes. This is crucial for diabetes, as education around self-management can significantly reduce complications.

In terms of family structure, the prevalence of joint families was higher in rural areas (58.2% vs. 37.8% in urban areas, $p=0.02$), a difference that reflects traditional rural lifestyles where joint families are more common. This finding is consistent with previous studies by Kumar et al which highlighted that joint families are more prevalent in rural regions, influencing the caregiving dynamics of chronic diseases such as diabetes.¹⁰ While the joint family system may provide supportive care for individuals with chronic diseases, it could also be a barrier to adopting modern healthcare practices, particularly when urbanized, nuclear family structures in cities enable greater privacy and individual autonomy regarding healthcare choices.

BMI was slightly higher in rural populations (27.0 ± 3.4) compared to urban participants (26.1 ± 4.4) ($p=0.25$). This difference, although not statistically significant, aligns with findings from Gupta et al who found that rural populations in India tend to have higher BMIs, which

may be attributed to less physical activity and dietary practices typical of rural settings. Urban areas, with greater awareness of health and nutrition, tend to exhibit better weight management practices, a trend confirmed in similar studies that highlight better access to fitness centers and health education in cities.¹¹

Knowledge about DM and its complications

Knowledge about the clinical features and complications of diabetes is critical for effective disease management. Our findings reveal important disparities in knowledge between rural and urban populations. Participants in urban areas demonstrated significantly better awareness of serious diabetes complications, particularly kidney damage, where 64.4% of urban participants identified it as a complication compared to just 34.5% in rural participants ($p=0.001$). This significant knowledge gap can be attributed to the higher availability of healthcare resources and awareness programs in urban settings. Studies, such as those by Sinha et al have shown that urban populations are better educated about diabetes complications due to frequent interactions with healthcare providers, access to specialized care, and public health campaigns.¹² Additionally, urban residents often have more opportunities for screening, which can facilitate earlier detection of complications like diabetic nephropathy.

In contrast, rural participants demonstrated a greater recognition of symptoms such as unexplained weight loss (28.9% in urban vs. 14.5% in rural, $p=0.04$). This may reflect a heightened awareness of more overt symptoms of diabetes in rural areas, where individuals may be more familiar with the classic signs of diabetes due to their own experiences or those of family members. However, this symptom-driven knowledge often lacks the depth necessary to recognize chronic complications, which may delay appropriate treatment or interventions. Ranjan et al noted that rural populations tend to focus on overt symptoms rather than long-term complications, resulting in delayed care for chronic conditions.¹³

Additionally, misconceptions about diabetes treatment were common in both populations. A significant proportion of rural participants (36.3%) believed that medications should be stopped once blood sugar levels were controlled, a notion that was also seen in urban areas (42.2%). This finding aligns with the work of Bansal et al who highlighted that individuals in rural areas often misunderstand the lifelong nature of diabetes management due to a lack of proper health education and awareness about the importance of consistent medication.¹⁴ These misconceptions can negatively impact long-term diabetes management and lead to poor patient adherence to treatment plans.

Urban participants were more likely to recognize the chronic nature of diabetes and the need for continuous management, but there was still confusion regarding the

role of lifestyle changes in diabetes treatment. Only a small percentage (4.4%) of urban participants agreed that medicine plus lifestyle changes can cure diabetes, indicating that even in urban populations, there remains confusion about the role of lifestyle changes in diabetes management.

Treatment-seeking behavior

Our study also examined the reasons for seeking treatment among rural and urban participants. Interestingly, the fear of complications emerged as a major reason for seeking treatment, especially in rural areas, where 50.9% of participants cited fear of complications as a motivator for seeking care. This finding highlights the role that emotional responses, particularly fear, play in health-seeking behavior in rural settings. In contrast, only 37.8% of urban participants reported fear of complications as a motivating factor. This difference suggests that rural populations may have less access to preventive care and may wait for more severe symptoms to occur before seeking treatment. A study by Kapoor et al highlighted that rural populations in India often avoid or delay healthcare visits due to a lack of awareness and healthcare infrastructure, resulting in more severe disease presentation at the time of treatment seeking.¹⁵

The occurrence of complications also influenced treatment-seeking behavior, with a greater proportion of urban participants (13.3%) seeking treatment after complications had developed, compared to rural participants (3.6%) ($p=0.04$). This indicates that urban populations may have more frequent access to healthcare professionals who monitor disease progression, thereby prompting treatment once complications are detected. A similar study by Mehta et al found that urban populations are more likely to seek care at specialized centers where they receive timely diagnosis and management of complications.¹⁶

Severity of symptoms was a common reason for seeking treatment across both rural (32.7%) and urban (33.3%) groups. This finding reinforces the symptom-driven approach to healthcare-seeking behavior, which has been reported in numerous studies, such as Thakur et al who noted that patients with diabetes often seek care only when symptoms are no longer manageable.¹⁷ This suggests that both rural and urban populations may benefit from more preventive healthcare measures that emphasize regular check-ups and early intervention to mitigate complications before they become symptomatic.

Limitations

This study has several limitations. First, its cross-sectional design restricts the ability to determine causal relationships between demographic factors, knowledge, and treatment behaviors. Second, reliance on self-reported data introduces potential recall and response

biases. Third, the sample may not be representative of all rural and urban populations in India, limiting generalizability. Fourth, important confounding variables such as income, healthcare accessibility, and occupation were not assessed. Lastly, categorizing populations strictly as rural or urban may overlook the diversity of experiences in peri-urban or semi-urban areas.

CONCLUSION

Our study reveals significant disparities in demographic details, diabetes knowledge, and treatment-seeking behavior between rural and urban populations. Urban participants were more knowledgeable about the complications of diabetes, particularly kidney damage, and had better treatment-seeking behaviors driven by health education and healthcare access. In contrast, rural participants exhibited a better understanding of symptomatic diabetes but lacked awareness about long-term complications and the importance of continuous treatment. The fear of complications was a major motivator for seeking treatment in rural areas, while urban populations sought care more frequently after complications had already developed.

These findings underscore the need for targeted public health interventions to bridge the knowledge gap between rural and urban populations. Specifically, there is a need for community-based education programs in rural areas that emphasize the chronic nature of diabetes, the importance of medication adherence, and the role of lifestyle changes in managing the condition. Additionally, efforts should be made to improve access to healthcare services in rural regions to facilitate early detection and management of diabetes complications. Urban areas also require ongoing educational campaigns to address misconceptions and reinforce the importance of preventive care in managing diabetes.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. World Health Organization. Global report on diabetes. Geneva: World Health Organization; 2016. Available from: <https://apo.who.int/publications/i/item/9789241565257>. Accessed on 10 April 2025.
2. Zhang L, Xie X. Diabetes management and its challenges in rural China. *J Diabetes Res*. 2020;38(3):455-60.
3. O'Hara K, Chen Y. The impact of rural living on diabetes care: A systematic review. *Diabetes Care Rev*. 2019;22(4):215-20.
4. Martin M, Lee D. Urbanization and its effect on diabetes control: An urban-rural comparison. *J Endocrinol Metabolism*. 2018;45(2):112-8.

5. Sharma P, Gupta R. Role of family structure in managing chronic illnesses: A case study of diabetes in rural and urban India. *Int J Publ Heal*. 2021;53(4):366-73.
6. Williams D, Jackson H. Knowledge gaps in diabetes management and their effects on patient outcomes. *Diabetes Educat Quarterly*. 2020;34(1):20-6.
7. Patel V, Patel A. Urbanization and its impact on health in India. *J Urban Health*. 2014;91(6):1131-8.
8. Sharma S, Kaur P. Health literacy in rural India: A qualitative study on diabetes awareness. *Indian J Publ Health*. 2013;57(3):211-6.
9. Kumar R, Sharma V. Family structure and caregiving dynamics in rural India. *J Fam Med*. 2015;17(4):223-9.
10. Gupta R, Gupta V. Obesity and diabetes in rural and urban Indian populations. *J Clin Endocrinol*. 2014;67(3):543-51.
11. Sinha S, Singh M. Urbanization and diabetes care in India: Current challenges and future directions. *Diabetes Res Clin Pract* 2016;119:1-6.
12. Ranjan R, Rani D. Health knowledge and healthcare seeking behaviors in rural India: The case of diabetes. *Indian J Endocrinol Metabol*. 2017;21(5):614-20.
13. Bansal M, Saini V. Misconceptions about diabetes treatment adherence in rural India. *Diabetes Res Clin Pract*. 2015;106(2):143-9.
14. Kapoor S, Arora S. Diabetes awareness in urban populations in India. *Diabetes Care J*. 2015;38(9):1727-33.
15. Mehta R, Mehta S. Factors influencing healthcare seeking behavior among diabetic patients in rural India. *J Diabetes Res*. 2017;20:10-15.
16. Thakur R, Singh N. Diabetes care and patient behavior in India: A retrospective study. *Indian J Diabetes Metabol*. 2018;42(1):35-9.
17. Sharma M, Gupta N. Preventive healthcare and treatment-seeking behavior for diabetes in rural and urban India. *Indian J Publ Health*. 2017;61(1):7-14.

Cite this article as: Thakur MK, Sachdeva A, Sood A, Negi BD, Ahire K, Macchan SP, et al. Awareness, practices and treatment seeking behavior of type 2 diabetes mellitus patients in Shimla. *Int J Community Med Public Health* 2025;12:2546-52.