

Original Research Article

Factors affecting compliance and health-seeking behaviour of hypertensive patients: a mixed-method study

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Received: 03 July 2026

Accepted: 21 August 2026

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ABSTRACT

Background: Hypertension is a leading modifiable risk factor for cardiovascular morbidity and mortality worldwide. Despite availability of effective pharmacological and lifestyle interventions, optimal blood pressure control remains suboptimal, largely due to poor treatment compliance and delayed or inappropriate health-seeking behaviour. Objectives were to assess the extent of treatment compliance among hypertensive patients; to identify determinants of antihypertensive treatment compliance; to explore factors affecting health-seeking behaviour; and to qualitatively explore accessibility, availability, challenges and opportunities influencing compliance.

Methods: A mixed-methods cross-sectional study was conducted at the non-communicable disease clinic of a tertiary care hospital in Surat, Gujarat, India from May to October 2023. The quantitative component included 300 adult hypertensive patients selected by convenient sampling. Data were collected using a semi-structured questionnaire capturing socio-demographic details, lifestyle practices, treatment characteristics, and the Hill-Bone compliance to high blood pressure therapy scale. The qualitative component comprised in-depth interviews with 10 hypertensive patients; thematic analysis was performed.

Results: The mean±SD age of 300 participants was 56.8±10.7 years. Overall mean±SD for Hill Bone compliance score was 17.49±3.83 while those of medication compliance, sodium use and appointment keeping subscales were 9.38±2.22, 3.62±1.05 and 4.49±1.68 respectively. Only 61 (20.33%) participants were perfectly adherent according to Hill Bone compliance therapeutic scale while 239 (79.66%) participants were not. Qualitative themes included perceived severity of hypertension, financial constraints, health literacy, access barriers and the enabling role of family and counselling.

Conclusions: Treatment compliance and health-seeking behaviour among hypertensive patients are influenced by an interplay of patient-related, therapy-related and system-level factors.

Keywords: Health-seeking behaviour, Hill-Bone compliance scale, Hypertension, Mixed-method, Surat, Treatment compliance

INTRODUCTION

Hypertension is an increasingly important medical and public health issue. It is a Morden day's epidemic.¹ Hypertension is a leading risk factor for cardiovascular morbidity and mortality worldwide.² Adherence to treatment and medication is important to control high blood pressure. Low adherence to treatment is a major barrier to blood pressure reduction and control. Lack of or poor treatment adherence increases cardio vascular

morbidity and mortality.³ Poor adherence to anti-hypertensive drugs is a major cause of unsatisfactory blood pressure control. Hypertension doctors play an integral role in improving medication adherence in hypertensive patients.⁴

Hypertension is a major global public health challenge and a leading contributor to cardiovascular disease (CVD), stroke, chronic kidney disease and premature mortality. The global prevalence of hypertension has

increased substantially over the past three decades due to population ageing, urbanization, sedentary lifestyles, unhealthy diets and psychosocial stress. In India, hypertension prevalence ranges between 20-30% among adults, with low awareness, treatment, and control rates.⁵

Compliance with prescribed medications is critical in controlling blood pressure and preventing complications.⁶ Adverse effects of antihypertensive drugs, such as fatigue, dizziness, or sexual dysfunction, can lead to poor adherence. Patients may discontinue or reduce their medication doses without consulting their physicians if they experience unpleasant side effects.⁷

Effective communication and a strong therapeutic relationship between healthcare providers and patients are critical for enhancing adherence. Patients who feel supported by their doctors are more likely to follow their treatment regimens.⁸ Patient dissatisfaction with the doctor, poor doctor-patient relationship, or long waiting times to obtain appointments increase the risk of non-compliance. Multiple drug therapy and multiple frequency of dosing also increase the risk of non-compliance. The lack of a patient-friendly, flexible health care system has also been identified as the primary reason for non-compliance.⁹

Health-seeking behaviour includes the processes by which individuals recognize symptoms, decide to seek care, choose healthcare providers and adhere to prescribed management. In chronic asymptomatic conditions such as hypertension, patients often underestimate disease severity, leading to delayed care-seeking and poor long-term adherence. Socio-demographic characteristics, health beliefs, cultural norms, economic constraints and health-system responsiveness substantially influence this behaviour. All of these factors work against successfully preventing hypertension. Multi intervention approaches are needed to overcome these difficulties, at the individual, community and policy levels.¹⁰

Mixed-methods approaches are particularly useful in understanding adherence and health-seeking behaviour, as quantitative measures estimate the magnitude and determinants, while qualitative inquiry provides contextual insights into lived experiences, beliefs and systemic barriers. Limited data are available from Gujarat exploring these issues comprehensively. This study aimed to address this gap by assessing compliance and health-seeking behaviour among hypertensive patients attending a tertiary care facility in Surat using a mixed-methods design.

METHODS

Study design and setting

A cross-sectional mixed-method study was conducted in NCD clinic of a tertiary care hospital in Surat, Gujarat.

The study aimed to know factors affecting compliance and health-seeking behaviour of hypertensive patients.

Study population and sampling

Adult hypertensive patients (≥ 18 years) attending the clinic during the study period from May 2023 to October 2023 were included in the study. Patients with major comorbidities or unwilling to consent were excluded. A total of 300 participants were enrolled conveniently. Ten participants were conveniently enrolled for in-depth interviews.

Data collection tools

A pre-tested semi-structured questionnaire captured socio-demographic details, clinical characteristics, lifestyle practices and treatment-related information. (Treatment compliance was assessed using the Hill-Bone compliance to high blood pressure therapy scale- the Hill-Bone CHBPTS was developed by Kim et al in 2000, which is a measure of antihypertensive treatment compliance that includes 14 items; a score of 14 represents perfect adherence, and a score greater than 14 represents non-perfect adherence. Each item is scored on a 4-point scale, response options consist of “none of the time=1”, “some of the time=2”, “most of the time=3”, and “all the time=4”. The total score ranges from the lowest 14 to the highest 56; minimum score is 14 which shows perfection and maximum score is 56 which shows worst compliance).¹¹ Qualitative data were collected using a semi-structured interview guide.

Ethical considerations

Ethical approval was obtained from the ‘human research ethics committee’ of the Government Medical College, Surat. Written informed consent was obtained from all participants.

Statistical analysis

The collected data were analysed using both descriptive and inferential statistics. Descriptive statistics included frequency tables, measures of central tendency and measures of dispersion. Inferential statistics, including Chi-square, t-test, ANOVA were used to assess relationships between variables and to draw conclusions. The internal consistency of the Hill Bone compliance to high blood pressure therapy scale was assessed using Cronbach’s alpha. The overall reliability coefficient of the scale in the present study was $\alpha=0.83$, indicating good internal consistency.

Qualitative data from open-ended questions and key informant interviews were analysed thematically, with codes and themes reported in narrative form. Quantitative data analysis was conducted using the Statistical Package for Social Sciences (SPSS).

RESULTS

310 participants were conveniently enrolled from non-communicable disease clinic, medicine department, New Civil Hospital Surat.

Quantitative findings

Socio-demographic characteristics of study participants

Majority of participants 150 (50%) belonged to the 40-59 years of age group, 175 (58.3%) were females and 125 (41.6%) were males. Majority of participants were

Hindus 234 (78%). Majority the participants were married 241 (80.3%). More than half of the participants belonged to urban middle-class areas 167 (55.6%). About one-fourth had completed primary education 76 (25.3%). Majority were housewives 167 (55.6%). More than half of the participants belonged to nuclear families 166 (55.3%). According to socio-economic classification, majority of participants belonged to class IV 89 (29.6%) (As per Modified BG Prasad's classification, taking AICPI=138.4, October, 2023). Only 7 (2.3%) participants have smoking habit, while 31 (10.3%) have habit of tobacco chewing. 297 (99%) participants do not have habit of alcohol.

Table 1: Socio-demographic characteristics of study participants.

Variables	Category	Frequency	Percentage
Age (years)	20-39	012	04.0
	40-59	150	50.0
	60-79	131	43.7
	≥80	007	02.3
Gender	Male	125	41.6
	Female	175	58.3
Religion	Hinduism	234	78.0
	Islam	065	21.6
	Christianity	001	00.3
Marital status	Married	241	80.3
	Widow	059	19.6
Address	Rural	029	09.6
	U. Middle	167	55.6
	U. Slum	104	34.6
	Illiterate	132	44.0
Education	Just literate	002	00.6
	Primary	076	25.3
	Secondary	058	19.3
	Higher secondary	014	04.6
	Graduate	015	05.0
	post graduate	003	01.0
	Professional	007	02.3
	Shop owner	004	01.3
Occupation	Farm owner	002	00.6
	Skilled worker	054	18.0
	Unskilled worker	016	05.3
	Unemployed	050	16.6
	Housewife	167	55.6
	I	020	06.6
Socio -economic class	II	042	14.0
	III	068	22.6
	IV	089	29.6
	V	081	27.0
Type of family	Nuclear	166	55.3
	Joint	010	03.3
	Three generation	124	41.3
Smoking habit	Yes	007	02.3
	No	293	97.6
Tobacco chewing	Yes	031	10.3
	No	269	89.3
Habit of alcohol	Yes	003	01.0
	No	297	99.0

Table 2: Comparison of total hill bone compliance score with socio-demographic factors.

Variables	Category	N	Total Hill Bone compliance score		
			Mean±SD	P value	Test applied
Geographical Location	Rural	29	18.14±4.462	0.354	ANOVA
	Urban Middle	167	17.23±3.055		
	Urban Slum	104	17.75±4.692		
Gender	Female	175	17.76±3.987	0.289	T-test
	Male	125	17.13±3.603		
Marital status	Widow	59	17.90±3.642	0.477	T-test
	Married	241	17.40±3.886		
Education	Illiterate	132	18.12±4.115	0.368	ANOVA
	Just literate	2	17.50±0.707		
	Primary	76	16.95±3.939		
	Secondary	58	17.05±2.898		
	Higher secondary	14	17.36±4.431		
	Graduate	15	16.87±3.623		
	Post graduate	3	16.33±2.082		
Type of family	Nuclear	166	17.54±3.969	0.363	ANOVA
	Joint	10	15.80±1.317		
	Three generation	124	17.58±3.783		

Table 3: Subscales of the Hill-Bone compliance scale.

Subscale	Minimum	Maximum	Median	SD	Q1	Q3	IQR
Medication taking	8	24	9	2.22	3	4	1
Sodium intake	3	9	3	1.05	3	6	3
Appointment keeping	3	10	3	1.68	8	10	2

Table 4: Summary of participants' response to HBTCS.

Subscales	Level of adherence	Frequency	Percentage
Adherence to medication taking (8 items)	Perfect adherence (score = 8)	137	45.66
	Non-adherence (score >8)	163	54.33
Adherence to reduce salt intake (3 items)	Perfect adherence (score = 3)	203	67.66
	Non-adherence (score >3)	97	32.33
Adherence to appointment keeping (3 items)	Perfect adherence (score = 3)	161	53.66
	Non-adherence (score >3)	139	46.33
Overall treatment adherence (14 items)	Perfect adherence (score =14)	61	20.33
	Non- adherence (score >14)	239	79.66

Participants from rural areas had a slightly higher mean compliance score (18.14±4.462) compared to urban middle (17.23±3.055) and urban slum (17.75±4.692), the difference was not statistically significant (p=0.354). Females showed marginally higher compliance (17.76±3.987) than males (17.13±3.603), but this difference was not significant (p=0.289). Widows had a slightly higher mean score (17.90±3.642) compared to married individuals (17.40±3.886); however, the difference was not statistically significant (p=0.477). Illiterate participants had the highest mean compliance score (18.12±4.115), while postgraduates had the lowest (16.33±2.082). Despite this variation, the difference across educational levels was not statistically significant (p=0.368). Participants from three-generation families (17.58±3.783) and nuclear families (17.54±3.969) had

comparable scores, whereas joint families had slightly lower scores (15.80±1.317). However, the difference was not statistically significant (p=0.363). The results indicate that there was no statistically significant difference in total Hill-Bone compliance scores across any of the variables studied (p>0.05).

Subscales of the Hill-Bone compliance scale

The Hill-Bone compliance therapeutic scale is a measure of antihypertensive treatment compliance that includes 14 items grouped into three subscales: 1) reduced sodium intake, 2) appointment keeping, and 3) medication taking. The sodium subscale contains 3 items assessing dietary intake of salty foods (value range, 3-12); the appointment keeping subscale contains 3 items assessing appointments

for doctor visits and prescription refills (value range, 3-12); and the medication taking subscale contains 8 items assessing medication taking behaviour (value range, 8-32).

Medication compliance shows a median score of 9 with a low IQR (1), indicating that most participants have similar and consistent medication-taking behaviour. The small variability suggests good adherence and uniformity among participants. Sodium use has a median of 3 with a higher IQR (3), which reflects greater variability in dietary practices. This indicates that compliance with sodium restriction is inconsistent, with some participants following recommendations while others do not. Appointment keeping also has a median of 3, but the IQR (2) suggests moderate variability. This implies that while some participants regularly attend follow-ups, others miss or delay appointments, indicating partial compliance. Participants show better compliance in medication intake compared to dietary sodium restriction and appointment keeping. The highest consistency is seen in medication adherence, whereas lifestyle-related behaviour (diet and appointments) shows more inconsistency.

Summary of participants' response to HBTCS

The Hill-Bone CHBPTS is a measure of antihypertensive treatment compliance that includes 14 items; a score of 14 represents perfect adherence, and a score greater than 14 represents non-perfect adherence (Table 4).

Only 61 (20.33%) participants were perfectly adherent according to Hill Bone compliance therapeutic scale while 239 (79.66%) participants were not, while more than half of participant were perfectly adherent to appointment keeping only and (137) 45.66% perfectly adherent to medication taking and one third participants were perfectly adherent to reduce salt intake.

Distribution of participants as per Hill bone compliance scale

The HBCTS consists of 14 items. Every item of the tool is scored on four-point Likert scale (1= none of the time, 2= some of the time, 3= most of the time and 4= all of the time).

Table 5: Distribution of participants as per Hill bone compliance scale.

Hill bone compliance scale	All the time N (%)	Most of the time N (%)	Some of the time N (%)	None of the time N (%)
How often do you forgot to take your HT medicine?	1 (0.33)	3 (1)	144 (48)	152 (50.66)
How often do you decide not to take your high bp medicine?	1 (0.33)	2 (0.66)	91 (30.33)	206 (68.66)
How often do you eat salty food?	1 (0.33)	7 (2.33)	83 (27.66)	209 (69.66)
How often you sprinkle salt on your food before you eat it?	0 (0)	2 (0.66)	52 (17.33)	246 (82)
How often do you eat fast food?	0 (0)	2 (0.66)	26 (8.66)	272 (90.66)
How often do you make the next appointment before you leave the doctor's office? (reverse coding)	166 (55.33)	2 (0.66)	20 (6.66)	112 (37.33)
How often do you miss scheduled appointment?	2 (0.66)	4 (1.33)	24 (8)	270 (90)
How often do you forgot to get prescriptions filled?	1 (0.33)	3 (1)	23 (7.66)	273 (91)
How often do you run out of hbp pills?	2 (0.66)	2 (0.66)	23 (7.66)	273 (91)
How often do you skip your hbp medicine before you go to the doctor?	1 (0.33)	3 (1)	23 (7.66)	273 (91)
How often do you miss taking your hbp pills when you feel better?	0 (0)	3 (1)	28 (9.33)	269 (89.66)
How often do you miss taking your hbp pills when you feel sick?	0 (0)	3 (1)	23 (7.66)	274 (91.33)
How often do you take someone's else's hbp pills?	0 (0)	2 (0.66)	8 (2.66)	290 (96.66)
How often do you miss taking your hbp pills when you are careless??	0 (0)	4 (1.33)	16 (5.33)	280 (93.33)

A majority reported “none of the time” for non-adherent behaviors such as skipping medication, running out of pills, missing doses when feeling better or sick, and taking others' medication (~89-97%), reflecting high medication compliance. Similarly, dietary practices were relatively favorable, with most participants reporting not consuming salty food, fast food, or adding extra salt before meals (~69-90%), although a small proportion still reported occasional sodium intake. Regarding appointment-related behaviors, most participants did not

miss scheduled visits (90%), indicating good follow-up adherence. However, only 55.33% reported “all the time” for making the next appointment before leaving (reverse-coded item), suggesting scope for improvement in proactive appointment scheduling. Overall, the findings suggest high adherence to medication and lifestyle recommendations, with minor gaps in dietary control and appointment planning (Table 5).

Qualitative findings

A total of 10 in-depth interviews were conducted among hypertensive patients attending the NCD clinic of New Civil Hospital, Surat to explore factors affecting accessibility, availability of healthcare services and treatment compliance.

Participants reported that financial affordability and proximity to health facilities were key determinants influencing their choice of healthcare services. Patients preferred government hospitals because treatment and medicines were either free or inexpensive. Financial constraints sometimes prevented patients from purchasing medicines when they were not available at the hospital.

Participant 1: “Kitne saal davai ka kharcha karega, fir civil me aa gaye.”

Participant 3: “Paisa nahi lagta na, idhar, bahar mehngi davai aata he.”

Participant 8: “Kabhi kabhi paisa nahi hota, isliye dose miss kar deti hoon.”

Living close to the hospital also facilitate regular follow-up visits. Transportation difficulties and travel expenses were also commonly reported barriers, particularly for those residing far from the hospital. Additionally, patients mentioned long waiting times and delays in services, which further affected their healthcare utilization. Financial constraints sometimes prevented patients from purchasing medicines when they were not available at the hospital.

Participant 6: “Najdeek he, zyada travel ka problem nahi.”

Participant 10: “Bus milta hai, kabhi late ho jata hai, toh waiting mein time chala jata hai.”

Physical symptoms such as dizziness, weakness and joint pain limited their ability to travel to the hospital.

Participant 1: “Kabhi kabhi esa hota he ki mujse chala hi nahi jata, aur takleef itni ki me bol hi nahi sakti. Isliye davai lene me dikkat hota he.”

Forgetfulness and inadequate knowledge about regular medication use were also common reasons for missed doses.

Participant 4: “Kabhi kabhi bhool jata hoon dawa lene.”

Participant 7: “Dava lena yad nahi rehta, koi nahi batata kaise regularly lena hai.”

Family support was identified as an important facilitator of treatment compliance. Participants who received help from family members such as assistance with

transportation, reminders to take medicines or emotional support were more likely to maintain regular treatment. In contrast, individuals lacking family support often struggled to manage their condition independently.

Participant 6: “Beta le jata hai civil hospital, koi problem nahi.”

Participant 5: “Ladki madad nahi karti he, khana banake jati he, baki davai lena sab kuch khud karna padta hai.”

Overall, the qualitative findings highlight that financial barriers, transportation difficulties, physical health limitations, long waiting times, forgetfulness and inadequate knowledge negatively influence treatment adherence whereas affordable healthcare services and family support act as important facilitators for maintaining compliance among hypertensive patients.

DISCUSSION

Quantitative component

Lack of adherence to the treatment is a problem for patients with hypertension to achieve control of blood pressure. The goal of this study is to better understand the factors that influence the adherence and compliance. Socio-demographic and therapy-related determinants, along with health-system barriers, significantly influenced adherence and health-seeking behaviour.

In this study it was found that there was no association between gender and treatment compliance. Similar results were found in study conducted by Vijna in Varanasi, no significant association was seen between gender and treatment compliance.¹² In a study done by Rao et al in Manipal found that adherence was significantly higher among females as compared to males (p value- 0.002).⁹

In a present study no significant association found between geographical location and treatment compliance. Nagamine et al done survey among 1200 subjects of Myanmar and found that 21.5% of urban residents and 48.4% of rural residents were not adherent to hypertension treatment.¹⁴ Similarly study conducted by Bhusal et al in Kathmandu no significant association found between geographical location of patients and treatment compliance.¹⁵

Here in this study, there was no significant association found between marital status and treatment compliance. Similar results were found in a study conducted by Vijna et al in Varanasi as well as by Bhusal et al in Kathmandu where no significant association was found between marital status and treatment compliance.^{12,15}

In a present study there was no significant association found between education and treatment compliance. In a study done by Rao et al in Manipal among 426 subjects availing treatment from tertiary care centre found that

literacy status was not associated with treatment compliance.⁹ Similar results were found in a study conducted by Munteja et al at New Delhi.¹³

According to observations of present study there is no significant association found between type of family and treatment compliance. Similar results were found in a study conducted by Shakya et al in Kathmandu as well as in a study conducted by Vijna et al in Varanasi.^{12,16}

In present study there was no significant association found between religion and treatment compliance. Similar results were found in study conducted by Vijna et al in Varanasi as well as study conducted by Azizah et al in Malaysia.^{12,17}

Hill-Bone CHBPTS scales includes 14 number of questions, each sub-scale is composed of a different range of values. The reduced sodium intake subscale contains three questions (value range, 3-12). Participant's obtained median was 3 points (SD±1.05) on this scale. The appointment keeping subscale includes 3 questions (value range, 3-12), and participant's obtained median was 3 points (SD±1.68). The medication taking subscale includes 8 questions (value range, 8-32), and participant's obtained median was 9 points (SD±2.22). This implies that participants show better compliance in medication intake compared to dietary sodium restriction and appointment keeping. The highest consistency is seen in medication adherence, whereas lifestyle-related behaviour (diet and appointments) shows more inconsistency. Similar to this study conducted by Uchmanowicz et al among 150 participants in San Francisco found low compliance with appointment keeping and medication taking.¹⁸

According to overall treatment adherence score 61 (20.33%) participants were perfectly adherent according to Hill Bone compliance therapeutic scale while 239 (79.66%) participants were not. Similar to this study conducted by Shakya et al among 282 hypertensive participants in Kathmandu district, Nepal found only 10.6% respondents were perfectly adherent to all subscales of HBCTS scale.¹¹

Qualitative component

Understanding the complexity in managing hypertension treatment we found many problems and challenges which was faced during treatment, related to accessibility, availability and affordability of medication.

In this study some patient's continued reliance on the same health facility where they receive treatment for diabetes demonstrates the importance of consistent and integrated care for chronic diseases. Despite the respondent's long-term association with their health facility, they reported that the distance to the facility posed a significant challenge. Few patients mentioned that they face transportation difficulties when accessing

services, but because treatment is essential, they make the effort to visit every one to two months. This finding supports previous studies that have identified geographic distance as a major barrier to accessing healthcare services, particularly in rural settings.¹⁹

In terms of financial constraints, the patients did not report any significant financial barriers to accessing care or obtaining medications as its available with minimal charges in government setup. However, the transportation-related challenge could indirectly affect their overall expenditure and time management. These factors are often interlinked, as time lost due to long travel, it affects working hours which can lead to loss of their daily wages.²⁰

In present study when asked about support during their treatment, all respondent highlighted that they received help from family members and their social circle. This support likely plays a critical role in sustaining treatment adherence, as various studies have shown that family support significantly impacts the health outcomes of individuals with chronic illnesses. In the absence of formal healthcare assistance, family involvement may be crucial in managing regular visits to healthcare facilities, purchasing medications and providing emotional and physical care. Family's behaviour and knowledge can affect treatment compliance of the patient. Understanding the value of antihypertensive medication in chronic disease like hypertension family plays important role for adherence to medication.¹⁹

In present study patient did not express any dissatisfaction with the quality of care or services received from the health facility. They believed that the diagnostic services, treatment, counselling and referral processes were adequate with no recommendations for improvement. This response suggests that the facility is performing satisfactorily in this area at least from the patient's perspective.

CONCLUSION

In a present study only 61 (20.33%) participants were perfectly adherent to the treatment; while 239 (79.66%) participants were not adherent to the treatment. Majority of participants satisfied with current health care system including availability of health care providers and medications.

Funding: No funding sources

Conflict of interest: None declared

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

REFERENCES

1. Momin MH, Desai VK, Kavishwar AB. Study of socio-demographic factors affecting prevalence of

- hypertension among bank employees of Surat City. *Indian J Public Health*. 56(1):44-8.
2. Musunguzi G, Anthierens S, Nuwaha F, Van Geertruyden JP, Wanyenze RK, Bastiaens H. Factors influencing compliance and health seeking behaviour for hypertension in Mukono and Buikwe in Uganda: a qualitative study. *Int J Hypertens*. 2018;2018.
 3. Baharvand P, Malekshahi F, Babakhani A. Perception of hypertension and adherence to hypertension treatment among patients attending a hospital in western Iran: a cross-sectional study. *Heal Sci Rep*. 2023;6(8):1-8.
 4. Liu T, Zhao X, Huang M, Yang Y, Chen Z, He X, et al. Hypertension doctors' awareness and practice of medication adherence in hypertensive patients: a questionnaire-based survey. *Peer J*. 2023;11:1-21.
 5. Ministry of Health and Family Welfare. India Fact Sheet, National Family Health Survey-5 2019-21. 2019. Available from; <https://dhsprogram.com/pubs/pdf/FR375/FR375.pdf>. Accessed on 11 May 2026.
 6. Schafhalter-Zoppoth I, Walther A, Flattery D. Exclusion of non-English speaking, recently released prisoners. *Am J Public Health*. 2013;103(6):6-7.
 7. Prlic M, Hohl TM. INKTs foil fungi. *Cell Host Microbe*. 2011;10(5):421-2.
 8. Schaa KL, Roter DL, Biesecker BB, Cooper LA, Erby LH. Genetic counselors' implicit racial attitudes and their relationship to communication. *Health Psychology*. 2015;34(2):111.
 9. Rao CR, Kamath VG, Shetty A, Kamath A. Treatment compliance among patients with hypertension and type 2 diabetes mellitus in a coastal population of southern India. *Int J Prev Med*. 2014;5(8):992-8.
 10. Son PT. Hypertension in Vietnam: from community-based studies to a national targeted programme. Umeå universitet. 2012.
 11. Shakya R, Shrestha R, Shrestha S, Sapkota P, Gautam R, Sapkota B, et al. Translation, cultural adaptation and validation of the Hill Bone compliance to high blood pressure therapy scale to Nepalese Language. *Patient Prefer Adher*. 2022;957-70.
 12. Kshatri JS, Satpathy P, Sharma S, Bhoi T, Mishra SP, Sahoo SS. Health research in the state of Odisha, India: a decadal bibliometric analysis (2011-2020). *J Fam Med Prim Care*. 2022;6(2):169-70.
 13. Mutneja E, Yadav R, Ballav A, Gupta P. Frequency and predictors of compliance among patients taking antihypertensive medicines. *Indian Heart J*. 2020;72(2):136-9.
 14. Nagamine Y, Shobugawa Y, Sasaki Y, Takagi D, Fujiwara T, Khin YP, et al. Associations between socioeconomic status and adherence to hypertension treatment among older adults in urban and rural areas in Myanmar: a cross-sectional study using baseline data from the JAGES in Myanmar prospective cohort study. *BMJ Open*. 2023;13(1):1-8.
 15. Bhusal L, Deep Pathak B, Dhakal B, Simkhada N, Sharma N, Upadhaya Remi B, et al. Determination of level of self-reported adherence of antihypertensive drug (s) and its associated factors among patient with hypertension at a tertiary care center. *J Clin Hypertens*. 2022;24(11):1444-50.
 16. Nakwafila O, Mashamba-Thompson T, Godi A, Sartorius B. A cross-sectional study on hypertension medication adherence in a high-burden region in Namibia: exploring hypertension interventions and validation of the Namibia Hill-Bone Compliance Scale. *Int J Environ Res Public Health*. 2022;19(7):1-13.
 17. Palabindela R, Nagamani PS, Choudary N. Assessing adherence to hypertension medications and its impact on blood pressure control: a community-based observational study. *Asian J Med Sci*. 2023;14(12):61-6.
 18. Wang A, Wan J, Zhu L, Chang W, Wen L, Tao X, et al. Frailty and medication adherence among older adult patients with hypertension: a moderated mediation model. *Front Public Health*. 2023;11:1283416.
 19. Shakya R, Shrestha S, Gautam R, Rai L, Maharjan S, Satyal GK, et al. Perceived illness and treatment adherence to hypertension among patients attending a tertiary hospital in Kathmandu, Nepal. *Patient Prefer Adher*. 2020;14:2287-300.
 20. Abdul Wahab NA, Makmor Bakry M, Ahmad M, Mohamad Noor Z, Mhd Ali A. Exploring culture, religiosity and spirituality influence on antihypertensive medication adherence among specialised population: a qualitative ethnographic approach. *Patient Prefer Adher*. 2021:2249-65.
 21. Ojangba T, Boamah S, Miao Y, Guo X, Fen Y, Agboyibor C, et al. Comprehensive effects of lifestyle reform, adherence, and related factors on hypertension control: A review. *J Clin Hypertens*. 2023;25(6):509-20.
 22. Shi C, Cao P, Wang Y, Zhang Q, Zhang D, Wang Y, et al. PANoptosis: a cell death characterized by pyroptosis, apoptosis, and necroptosis. *J Inflamm Res*. 2023;16(April):1523-32.
 23. Li M, Gorski M, Tin A, Wang L, Kirsten H, Ho K, et al. HHS Public Access. 2019;51(6):957-72.

Cite this article as: Baria BB, Momin MH. Factors affecting compliance and health-seeking behaviour of hypertensive patients: a mixed-method study. *Int J Community Med Public Health* 2026;13:5227-5234.