

Original Research Article

Perception of hypertension among the rural inhabitants of a district in Assam: a qualitative study

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ABSTRACT

Background: With the current epidemiological transition, India faces triple burden of disease and hypertension has emerged as a major problem. Effective prevention and control strategies need adequate knowledge regarding the perception and understanding of hypertension from a layman's viewpoint. The qualitative study aimed to understand the layman's perceptions and the basis of it.

Methods: Five focus group discussions (FGD) were conducted among rural inhabitants of Assam with grounded theory approach and social constructivist paradigm. Data mining with thematic and content analysis was done.

Results: Hypertension was perceived to be a serious problem in the community. The people were not clear regarding the symptoms. Faulty diet, household and work-related stress and environmental change were considered as major predisposing factors for hypertension. They perceived their lack of knowledge and so was the importance of awareness campaigns and regular screening in the community. Slight variations in perception of hypertension among man and woman was seen. Men perceived physical inactivity as the major issue while women perceived household stress as the leading cause for hypertension.

Conclusions: Hypertension is a serious problem in the community. The community lacks understanding of the symptoms of hypertension. Awareness regarding the problem is there but the treatment seeking behavior is lacking. There was a felt need of awareness campaigns and regular screening. This will help in filling the dearth of knowledge on hypertension in the community leading to effective prevention and control.

Keywords: India, Non-communicable diseases, Perception, Qualitative study

INTRODUCTION

Hypertension is currently the leading cause and a significant factor contributing to other cardiovascular diseases in many developing nations including India.^{1,2} It is observed that the risk of coronary artery disease among the Asian population is quite high, probably due to genetic make-up but the exact reason is still not known.³ Since India is in developing phase, there is rapid change in demography, many of the disorders due to lifestyle changes is in increasing trend and there is a strong

correlation with hypertension cases in India.⁴ Earlier, thought to be the disease of the rich, the evidence suggests that the families with lower socioeconomic status are not exempted.^{5,6} The socioeconomically disadvantaged and rural population had more of undiagnosed cases of hypertension than that of general population.⁷ Even in other parts of India, the status is same and the prevalence of hypertension is more in the vulnerable and rural population.⁸ In this context, the research becomes more useful and it is the need of the hour to explore their perceptions and how the community

views the problem of hypertension. These beliefs and perception are important to frame strategies for prevention and control of the problem. Thus, this study aimed to understand the various explanations for their perceptions on hypertension among the rural residents of a district in Assam.

METHODS

This qualitative study used a grounded theory approach to understand how the rural population of Assam view hypertension and on what grounds their perception is based on. The study was conducted from September 2025 till August 2026. The study used a social constructivist paradigm. This paradigm was used as it helps in exploring the perspectives of the community members on hypertension and take insights on this topic.

Data collection was done by focus group discussion (FGD) with the community members. The FGD would capture information of the people's viewpoint, their judgement, understanding and the group would yield rich information and broader insights regarding their perception on hypertension.^{9,10} The FGD can imprint a picture of the socially acceptable and favourable responses as well as their individual perception on hypertension.

Study participants

Five FGD was conducted with the community members. One FGD was conducted among 6-7 members. The participants were recruited purposively; those who were knowledgeable, vocal, and willing to participate. The FGD was based on their gender so that the participants can yield information that can be generalizable to the society. The research team comprised of the principal investigator and the second author. Both were familiar with the community and they had shifted to the study area and were residing there for one year. They were conducting free health camps, would attend the social gatherings, and had a good rapport with the participants and the society. Thus, identifying people to participate in the study was relatively done in a short period of time. There were 32 participants, of which 18 were women and 14 were men. All the women participants were in FGD 1, FGD 3 and FGD 5 and were all housewives. The FGD 2 and FGD 4 were conducted among men. The education status of all men was at least till higher secondary and three of them were graduate. All women were educated till class V and six of them had passed matriculation examination.

Study instruments

The FGD guides were built based on the previous literature on hypertension.¹¹ It was developed in English and then was translated to Assamese. It was pre-tested among the men and women of a nearby village having similar sociodemographic characteristics to check the reliability and ease to acquire the data in the community

setting. The FGD guide included the following question lines: Is hypertension a problem in your society? Tell me the reasons for hypertension. Who are those people who can get hypertension? Were all those who got the disease were aware of it? What are the consequences of hypertension? Can anyone say more on this topic?

Study procedures

FGDs were conducted among the community participants. The principal investigator was the moderator for all the sessions and the second investigator was keeping the field notes and capturing the gestures, non-verbal cues, their actions, gestures, and discussion points. The principal investigator started the audiotape recordings after taking prior permission from the participants. All the discussions were conducted in Assamese language. The FGD ended with summarizing the brief and salient points of the discussion in front of the participants and a vote of thanks. Each session took around 1-1½ hours.

Ethical considerations

The study was approved by the institutional ethics committee. All the participants were briefed about the study objectives and its implications on the society. Voluntary verbal consent was taken before interviewing and audio tape recording of the discussion. Financial incentives were not given to any participants but were explained that health awareness session would be conducted depending on the results and a screening camp would be organized for the community.

Data management and analysis

The audiotape recordings of the FGDs were transcribed in Assamese language. Field notes were also referred while writing the transcripts. The validity of the transcripts was checked by all the investigators individually and independently. The Assamese transcripts were translated into English by the second investigator. Some of the English translations were back translated to Assamese by the third investigator to check the linguistic efficacy and correctness.

The data of initial two FGDs (one comprising men and the other women) were read several times and was reorganized under relevant themes. Appropriate sub-themes and relevant codes were identified and supporting quotes were grouped under relevant codes. Data mining was done by thorough reading several times for their robustness. Subsequent FGDs were discussed under those themes and quotes for the same was penned down under the relevant headings. The reorganized data was analysed and inferences were drawn. The final inference was drawn after combining the inferences of all the FGDs. The inferences drawn were cross validated by a subject expert (not involved in this research) in the field of qualitative research who gave the feedback after independently reading the data.

RESULTS

Various themes that emerged from the FGDs were presented under the following headings: (a) problem statement of hypertension in the community, (b) causes of hypertension, (c) awareness in the community and (d) solutions to prevent hypertension.

Problem statement of hypertension in the community

The community perceived hypertension as 'BP' (blood pressure). The study participants stated that a hypertensive person is called as having 'BP'; the participants were also aware about low blood pressure and they termed it specially as 'low BP'.

The study participants perceived hypertension to be a serious problem. It was prevalent in the community as well like other diseases like tuberculosis, diabetes etc. During FGD 2, one man (32 years old) expressed that hypertension is not a common problem in the community. This ignited a discussion among the participants and later the group arrived at the consensus that hypertension was an important and a serious problem in that community.

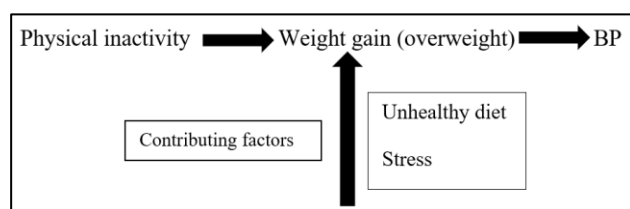


Figure 1: Perceived pathway of physical activity to BP.

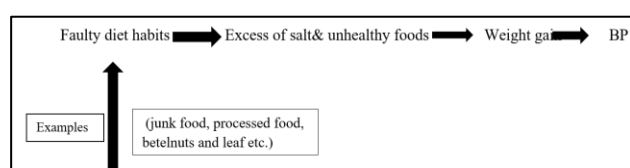


Figure 2: Perceived pathway of faulty dietary habits to BP.

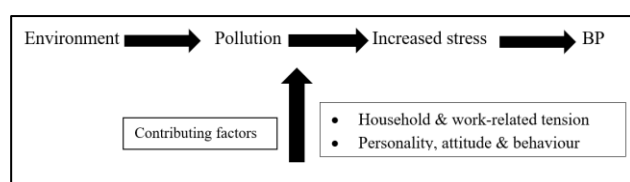


Figure 3: Perceived pathway of environment leading to BP.

Causes of hypertension

The FGDs identified several different causes of hypertension such as old age, sedentary lifestyle, obesity, physical inactivity, tension, dietary habits like smoking/

chewing tobacco etc. were responsible for its high prevalence. To this, one female respondent in FGD 5 contributed to a new domain that hypertension could be possible even in early age as she has seen her nephew to be having 'BP'.

"I have seen my nephew who is just 12 years old with BP. Doctors say that his kidneys are not good."

Other participants perceived female gender and faulty dietary habits to be the risk factors for hypertension. During an FGD, one graduate man (aged 41 years) commented on the preference of foods and dishes among today's generation.

"Eating habits in today's generation has changed a lot. While we were young, my father used to bring fresh vegetables from our own garden. Now-a-days, children tend to incline themselves into consuming more fats, oily foods, fast foods, chips etc. They do not want to take green vegetables and fruits."

The FGD 2 among the men explained that physical inactivity was important contributor for BP.

"Physical inactivity was also one of the reasons for BP". A male participant (aged 30 years) commented "High BP is a disease of old. The old people use to sit all day, do nothing, and eat betelnuts and tobacco. So, all older men and women get BP when they are old. During youth, they were indulged in doing work so they did not get BP."

Stress was also considered as the chief reason for hypertension by almost all the FGDs. The study participants identified the issues of unemployment, inflation, insecurity in life, hassle, and problems in their daily life like food security, electricity, water supply, workplace related problems, problems related to their child's behaviour, their education, tuition, their children's marriage, corruption in the government etc. Few minor differences were observed among the men and women. Men considered physical inactivity, stress and dietary habits were important attributes for hypertension. Women considered stress as the leading factor followed by dietary habits and physical inactivity. The stress was perceived in two different ways by men and women. Men perceived stress due to financial insecurity as they are generally the sole bread-earners for their families. Demands put forward by their children in acquiring new liabilities like owning a bike, problems for managing their studies and education, fulfilling the demands of their family, and running their family and the stress of keeping pace with the society all adds to the stress among men. Women, on the other hand, perceived stress for the routine chores of the life particularly the decision related to kitchen and food. Women tend to become obese after childbirth. One of the most common statements put in many ways by all the female participants.

“Our husbands use to misbehave with us. Our son does not listen to what we say, they demand for expensive things, particularly motorcycles, with that they will roam around and lack interest in studies. Girls often go for love affairs and our tension is that they may become pregnant. Who will marry them, then.”

In addition to these, one another female added the behaviour of their husbands that lead to BP among women.

“Husbands use to fight with us after drinking in the evening. They would misbehave and mistreat saying the cooked food is not good and all. Sometimes, they beat us. All things create tension in our lives.”

Urbanization and commercialization as a cause of hypertension

The participants perceived that commercialization of the food products and preference to live in the urban area is associated with hypertension. The major factors identified were (I) food adulteration, (II) attitude of people, (III) dietary factors. In the FGD 4, it was expressed that food and greed are important driving forces for hypertension.

“All this BP is due to adulteration of food products and consumables. See, the size of the cauliflowers, all these is due to artificial injection of hormones. The local (country) chicken is not at all local now. They are given artificial environment so that they can be reared in captivity and can be sold at a higher price. All this tend to affect our liver and cause BP.”

Attitudes of the people have also changed drastically compared to olden times mainly to earn easy and quick money.

“The vendors tend to sell their consumables at a higher rate. For that, they give harmful chemicals in their food. For their profit, they play with our lives. The adulterated food has caused all these problems of BP, sugar (diabetes mellitus), uric acid (gout).”

Another participant added to the above statement regarding the attitude of consumers of that food.

“Consuming this adulterated food has made us short tempered, irritable and angry over trivial things.”

Awareness in the community

All the FGDs came to a consensus that there was lack of awareness on hypertension in the community. They all agreed that almost all the people of the community were not aware about their BP status. Often, they get either incidentally diagnosed or when their blood pressure rises too high. FGDs pointed out that the community lacks knowledge of the sign and symptoms of ‘BP’. In FGD 3,

a woman (aged 39 years) pointed to varied symptoms of ‘BP’ a patient has.

“My mother-in-law was complaining of leg pain and tingling sensation in her toes for about 2 months. Initially we thought that she was lying. But, then, when we took her to the medical, doctor told us that she has ‘BP’, we never imagined that she can have BP because she was thin and she use to take only home-made vegetables grown in our garden.”

It indicated that the individual’s lack of knowledge on hypertension is mainly attributed to various symptoms that it presents with.

In FGD 4 and FGD 5, the participants perceived hypertension to be an asymptomatic disease, difficult to diagnose due to ambiguous symptoms of presentation and is not specific. The FGD 4 even discussed that hypertension can lead to many other illnesses of heart and can cause stroke. One of the female participants expressed her views on hypertension.

“Nobody knows when or how it (BP) will come. But, it is destined to come for all with increasing age. It is just how it will come we do not know.”

Thus, it was evident that a gap in awareness regarding hypertension was present in the community.

Solutions to prevent hypertension

Almost all the FGDs pointed to low salt diet, avoiding consumption of vegetables grown with heavy fertilizers, avoiding packaged commercially available foods. Many participants believed that a change in dietary pattern should be done. The government should stress on growing organic foods. Heavy punishments should be levied on those cultivators who uses fertilizers. A 34-year-old man suggested

“BP Prevention can be done by eating fresh vegetables from our fields, maintaining healthy lifestyle, restraining from consuming heavy alcohol because it can damage the liver and result in BP, sugar (Diabetes), cholesterol (Hypertriglyceridemia) etc.”

They further opined that decreasing tension will lead to control of BP. Although domestic and work-related tensions cannot be omitted totally but a person should maintain his/her cool, temper and anger.

Awareness for preventing hypertension

There was a felt need among the FGD participants that regular screening and awareness campaigns can disseminate the knowledge of hypertension and its symptoms and preventive measures. The health seeking behaviour of the community can be changed. The FGD 1

and FGD 2 among men and women supported the above-mentioned statement.

“Government should take up awareness campaigns in the community and now since AIIMS have come up, the hospital should organize such camps and screening of the community should be done regularly.”

Another participant (Male, 38 years) pointed that the importance of information, education and communication (IEC) materials.

“We have never seen any banners of BP unlike TB and HIV. Even, no ads are displayed for BP. Campaigning and ads are important to bring awareness.”

A respondent (female, 36 years) also supported and gave her viewpoint on the importance of IEC.

“Just like Amitabh Bachchan says Desh Jikibo, TB Haribo; similarly, somebody else must also say something on BP. Then only we will come to know what is the main issue now”.

DISCUSSION

This study helped in highlighting the community perspectives on hypertension. It was perceived to be very serious and a common problem in their society. The perspectives of the rural population were mainly social in origin that focused with problems of unemployment, inflation, insecurity, household, and work-related issues. In the present study, lack of healthy diet, physical inactivity, and stress were identified to be the major causes of hypertension. Stress was the major cause of hypertension in other studies as well.¹²⁻¹⁵ The current study perceived hypertension to be symptomatic disease. The perceived pathways for hypertension from physical inactivity, faulty dietary habits and role of environment is being depicted in Figures 1-3. The perceived susceptibility and severity were adequate as they pointed that anyone with physical inactivity and faulty dietary habits can have hypertension. But, in other studies, the perception of risk and severity of hypertension was low.^{16,17} The study participants did mention about packaged food, unhealthy and processed food, even commented on vegetables being grown by rampant use of fertilizers. They also mentioned about physical inactivity. However, there was no mention about smoking, tobacco, and alcohol consumption even though it was widely prevalent in the community.¹⁸

There was a felt need among the participants that regular awareness and screening camps must be conducted by the nearby government tertiary level teaching health care hospital so that the community gets the maximum benefit. The Government of India has stressed on screening, management and prevention of the non-communicable diseases including hypertension and has launched a program targeting it in the form of National Programme

for Prevention and Control of Diabetes, Cardiovascular Diseases and Stroke (NPDCS) in the year 2010.¹⁹ Later, this program was renamed as National Programme for Non-Communicable Disease (NP-NCD) in May 2023. This particularly targeted on early screening, diagnosis, prevention of non-communicable diseases and creating awareness by adequate IEC. Study conducted by Powers et al emphasized on educating the patient on the risks associated with hypertension for favourable and better control of the blood pressure status.¹⁷ Vergara et al also stressed on creating awareness among the patients and associated risks along with the patient's perceptions for the disease has an important role in compliance, adherence and ultimately the outcome of the disease.²⁰

Thus, the present study emphasized on designing health education and promotion activities and culturally appropriate IEC materials for their understanding regarding the disease.

Since this study was conducted among rural inhabitants of a single district in Assam, so the findings should be generalized with caution for other rural or urban population or having different sociocultural demographic characteristics. The qualitative study is always subjected to selection bias as the inhabitants were chosen purposively. Lastly, there is always a chance of social desirability bias while data collection was done by the FGDs.

CONCLUSION

Hypertension is perceived as serious disease in the community and that needs medical care. The study concluded that the perception of the susceptibility and severity was adequate, however, there was a dearth in their understanding about hypertension that negatively affected their health seeking behaviour. There was a felt need among the study participants that regular awareness campaigns on hypertension and other NCDs must be conducted. In addition, regular health screening camps must be set up for early diagnosis and interventions and advices can be sought. This will in turn help in prevention and control of NCDs in the community.

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