

Original Research Article

Awareness and Preventive Practice on Hypertension among Rural People in Bangladesh

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Abstract: Background: Hypertension is a major global public health problem and a leading risk factor for cardiovascular diseases. Improving awareness is essential for promoting preventive practices and reducing hypertension-related morbidity and mortality. **Objectives:** To assess awareness and preventive practices regarding hypertension and to examine the relationship between awareness, socio-demographic characteristics, and preventive practice among rural adults in Bangladesh. **Methods:** A descriptive correlational study was conducted among 101 rural adults selected using a multistage sampling technique. Data were collected through face-to-face interviews using a structured questionnaire from February to March 2023. Descriptive statistics, independent-samples *t*-test, one-way analysis of variance (ANOVA), and Pearson's correlation coefficient were used to analyze the data. **Results:** The mean awareness score was 3.58 ± 0.46 , and the mean preventive practice score was 2.55 ± 0.35 , indicating moderate levels of awareness and preventive practice. Participants demonstrated higher awareness regarding stroke as a complication of hypertension, regular blood pressure measurement, and excess salt intake, whereas awareness of overweight, physical inactivity, and family history as risk factors was comparatively lower. Preventive practice was positively correlated with awareness ($r = .464, p < .001$). Age ($r = .286, p = .004$), marital status ($t = 2.69, p = .010$), and family history of hypertension ($t = 4.44, p < .001$) were significantly associated with preventive practice, while gender, religion, educational level, occupation, and monthly family income showed no significant associations. **Conclusion:** Rural adults demonstrated moderate awareness and preventive practices regarding hypertension. Higher awareness was associated with better preventive practices. Community-based health education and lifestyle promotion programs are recommended to improve hypertension prevention among rural populations.

Keywords: Hypertension, Awareness, Preventive Practice, Bangladesh.

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BACKGROUND

Hypertension is a silent killer and one of the most important global public health problems. It is among the most common lifestyle-related non-communicable diseases affecting populations in both developed and developing countries (Pokhrel & Kc, 2019). Hypertension is a major contributor to the global burden of disease and is recognized as one of the leading risk factors for cardiovascular morbidity and mortality (Ondimu *et al.*, 2019). Although hypertension is highly

prevalent, it is largely preventable and can be effectively controlled through early detection, appropriate treatment, and lifestyle modification (Musinguzi *et al.*, 2018).

Awareness of hypertension refers to an individual's knowledge of having elevated blood pressure ($\geq 140/90$ mmHg), a previous diagnosis by a healthcare professional, or current use of antihypertensive medication (Cissé *et al.*, 2021). Poor awareness delays the early adoption of lifestyle

modifications and timely initiation of antihypertensive treatment, thereby increasing the risk of complications (Cissé *et al.*, 2021). Furthermore, low educational attainment and poor socioeconomic status are associated with inadequate awareness of hypertension. Therefore, improving public awareness is essential for the early detection, prevention, and effective management of hypertension (Kumar *et al.*, 2016).

Preventive practices for hypertension involve adopting healthy lifestyle behaviors, including consuming a balanced diet, engaging in regular physical activity, maintaining a healthy body weight, limiting alcohol consumption, avoiding tobacco use, adhering to prescribed medications, and managing stress (Dorji *et al.*, 2021). Other recommended preventive practices include reducing dietary salt intake, regularly monitoring blood pressure, attending routine healthcare visits, and maintaining medication adherence (Worku Kassahun *et al.*, 2020).

Despite the availability of effective preventive measures, adherence to hypertension preventive practices remains inadequate worldwide. Globally, only approximately 23% of women and 18% of men achieve effective hypertension prevention and control (Zhou *et al.*, 2021). Previous studies reported considerable variation in preventive practices across countries, with only 24.2% of adults demonstrating adequate preventive practices in Ethiopia, compared with 72% in Ghana, 54.7% in India, and 89% in Canada (Smachew *et al.*, 2022). In Bangladesh, the prevalence of hypertension has increased substantially, rising from 20% in 2010 to 21% in 2013 and reaching 40.7% in 2017 (J. Islam *et al.*, 2018). Previous studies have also reported that hypertension affects approximately 53% of rural residents, 40% of older adults, and 25% of the adult population in Bangladesh (A. M. Islam & Majumder, 2012; Khanam *et al.*, 2019). Moreover, preventive practices against hypertension among Bangladeshi adults remain unsatisfactory (Rahman, 2018).

Several factors influence hypertension preventive practices, including inadequate awareness, unfavorable attitudes, and unhealthy lifestyle behaviors. Hypertension is associated with multiple genetic, hormonal, metabolic, neurological, psychological, and environmental factors (Bashaar *et al.*, 2019). Rapid urbanization and socioeconomic transitions have contributed to sedentary lifestyles, unhealthy dietary habits, excessive salt consumption, alcohol use, obesity, smoking, physical inactivity, psychological stress, and family history, all of which increase the risk of hypertension (Bashaar *et al.*, 2019; Khanam *et al.*, 2019). Conversely, reducing salt intake, consuming a healthy diet, engaging in regular physical activity, avoiding tobacco use, and limiting alcohol consumption can substantially reduce the risk of developing hypertension (Htun *et al.*, 2016).

According to the World Health Organization, cardiovascular diseases caused approximately 19.8 million people died from CVDs in 2022, representing approximately 32% of all global deaths. Of these deaths, 85% were due to heart attack and stroke (World Health Organization [WHO], 2017). Hypertension alone contributes to approximately 7.1 million premature deaths annually and is responsible for nearly 64 million disability-adjusted life years (DALYs) worldwide (Ondimu *et al.*, 2019). If left untreated, hypertension can lead to severe complications involving the brain, heart, kidneys, and eyes, resulting in disability or premature death (Buang *et al.*, 2019). Therefore, improving awareness and promoting preventive practices are essential strategies for reducing hypertension-related complications and improving population health outcomes (Bashaar *et al.*, 2019).

Although several studies have investigated hypertension in Bangladesh, limited evidence is available regarding awareness and preventive practices among rural adults. Understanding these factors is essential for developing effective community-based health promotion strategies. Therefore, this study aimed to assess the awareness and preventive practice on hypertension and to examine the relationship between awareness and preventive practice on hypertension among the rural adult people. The findings may assist healthcare providers and policymakers in designing targeted educational and community-based interventions to improve awareness and promote preventive practices for hypertension among rural populations.

METHODS

Study Design

A descriptive correlational study was conducted to assess awareness and preventive practices regarding hypertension among rural adults in Bangladesh. The study was carried out from July 2022 to June 2023.

Study Participants

The study was conducted among rural adults residing in Sadar Upazila, Dinajpur District, in northern Bangladesh. A multistage sampling technique was employed. Four unions were randomly selected from the 10 unions in the upazila, followed by the random selection of one village from each selected union. Participants were then recruited using convenience sampling. The required sample size was estimated using G*Power software with a significance level (α) of 0.05, statistical power of 0.80, and effect size of 0.30, yielding a minimum sample size of 84. After adding 20% to compensate for possible non-response, the final sample comprised 101 participants. Eligible participants were adults aged 18 years or older who voluntarily agreed to participate. Individuals with serious illnesses or physical disabilities that prevented participation were excluded.

Instrument

Data were collected using a researcher-developed structured questionnaire based on an extensive literature review. The questionnaire consisted of 38 items divided into three sections: (1) socio-demographic characteristics (8 items), (2) the Awareness on Hypertension-Related Questionnaire (AHRQ; 18 items), and (3) the Preventive Practice on Hypertension-Related Questionnaire (12 items).

The AHRQ used a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), with total scores ranging from 18 to 90. Higher scores indicated greater awareness of hypertension. The preventive practice questionnaire employed a 4-point Likert scale ranging from 1 (never) to 4 (always), with higher scores indicating better preventive practices.

The questionnaire was translated into Bengali using the forward-backward translation method by two independent bilingual translators to ensure conceptual equivalence. Content validity was established by three nursing experts from the National Institute of Advanced Nursing Education and Research (NIANER). A pilot study involving 30 participants was conducted, and these participants were excluded from the final study. The Cronbach's alpha coefficients were 0.73 for the awareness scale and 0.70 for the preventive practice scale.

Data Collection

Data were collected through face-to-face interviews by the principal investigator using the Bengali version of the questionnaire. Ethical approval was obtained from the Institutional Review Board of the National Institute of Advanced Nursing Education and Research (NIANER), Bangabandhu Sheikh Mujib

Medical University (IRB No. Exp.-NIA-S-2021/186). Permission was obtained from local community leaders before data collection. Written informed consent was obtained from all participants prior to the interviews, which lasted approximately 30 minutes. Participants were informed of their right to withdraw from the study at any time without penalty. Confidentiality, anonymity, and privacy were maintained throughout the study.

Data Analysis

Data were checked for completeness and analyzed using IBM SPSS Statistics. Descriptive statistics, including frequency, percentage, mean, and standard deviation, were used to summarize participant characteristics and study variables. Independent-samples *t*-tests, one-way analysis of variance (ANOVA), and Pearson's correlation coefficient were performed to examine the relationships between socio-demographic characteristics, awareness, and preventive practices. Statistical significance was set at $p < .05$ with a 95% confidence interval.

RESULTS

Socio-Demographic Characteristics of the Rural People

Table 1 shows the socio-demographic characteristics of the participants. The mean age was 41.23 ± 12.56 years (range: 22–77), and the mean monthly family/individual income was BDT $15,287 \pm 6,448.80$ (range: BDT 7,000–40,000). Most participants were male (65.3%), Hindu (60.4%), married (90.1%), had secondary or higher education (65.3%), and 39.6% were housewives or engaged in other occupations. Additionally, 65.3% reported no family history of hypertension.

Table 1: Distribution of Socio-demographic Characteristics of the Rural Participants (N = 101)

Main Variables		Frequency (n)	Percentage (%)	Mean $\pm$ SD
Age (years)	Range: 22–77			41.23 $\pm$ 12.56
Gender	Male	66	65.3	
	Female	35	34.7	
Religion	Hindu	61	60.4	
	Muslim	40	39.6	
Marital Status	Married	91	90.1	
	Unmarried	10	9.9	
Educational Level	Illiterate	15	14.9	
	Primary	20	19.8	
	Secondary and above	66	65.3	
Occupation	Service holder	11	10.9	
	Business	29	28.7	
	Farmer	21	20.8	
	Housewife and others	40	39.6	
Family History of Hypertension	Yes	35	34.7	
	No	66	65.3	
Monthly Family/Individual Income (BDT)	Range: 7,000–40,000			15,287 $\pm$ 6,448.80

Awareness on Hypertension among the Rural People

Table 2 presents the participants' awareness regarding hypertension. The overall mean awareness score was 3.58 ± 0.46 , indicating a moderate level of awareness. Participants demonstrated the highest awareness regarding stroke as a major complication of hypertension ($M = 4.50 \pm 0.63$), the importance of regular blood pressure measurement ($M = 4.47 \pm 0.63$), the role of excess salt intake in hypertension ($M = 4.21 \pm$

0.74), complications affecting vital organs ($M = 4.16 \pm 0.87$), and the contribution of junk food to hypertension ($M = 4.03 \pm 0.84$). In contrast, relatively lower awareness was observed regarding low vegetable intake as a risk factor ($M = 2.46 \pm 1.11$), family history as a contributing factor ($M = 2.70 \pm 1.39$), physical inactivity ($M = 2.77 \pm 1.22$), and overweight as a major cause of hypertension ($M = 2.77 \pm 1.20$).

Table 2: Distribution of Awareness Regarding Hypertension among Rural Participants (N = 101)

Items	Strongly Disagree n (%)	Disagree n (%)	Uncertain n (%)	Agree n (%)	Strongly Agree n (%)	Mean $\pm$ SD
1. Hypertension is a non-communicable disease.	12 (11.9)	15 (14.9)	17 (16.8)	32 (31.7)	25 (24.8)	3.43 ± 1.33
2. The normal blood pressure is 120/80 mmHg.	0 (0.0)	1 (1.0)	43 (42.6)	39 (38.6)	18 (17.8)	3.73 ± 0.76
3. The prevalence of hypertension is increasing in Bangladesh.	5 (5.0)	15 (14.9)	24 (23.8)	39 (38.6)	18 (17.8)	3.50 ± 1.10
4. Mental stress contributes to hypertension.	2 (2.0)	10 (9.9)	7 (6.9)	51 (50.5)	31 (30.7)	3.98 ± 0.98
5. Hypertension is a controllable disease.	2 (2.0)	5 (5.0)	9 (8.9)	66 (65.3)	19 (18.8)	3.94 ± 0.81
6. Smoking and alcohol increase the risk of hypertension.	3 (3.0)	5 (5.0)	22 (21.8)	50 (49.5)	21 (20.8)	3.80 ± 0.92
7. Family history contributes to hypertension.	30 (29.7)	17 (16.8)	16 (15.8)	29 (28.7)	9 (8.9)	2.70 ± 1.39
8. Headache is a common symptom of hypertension.	14 (13.9)	27 (26.7)	11 (10.9)	43 (42.6)	6 (5.9)	3.00 ± 1.22
9. Low vegetable intake may contribute to hypertension.	26 (25.7)	26 (25.7)	27 (26.7)	21 (20.8)	1 (1.0)	2.46 ± 1.11
10. Excess salt intake contributes to hypertension.	1 (1.0)	2 (2.0)	7 (6.9)	56 (55.4)	35 (34.7)	4.21 ± 0.74
11. Physical inactivity contributes to hypertension.	18 (17.8)	27 (26.7)	23 (22.8)	26 (25.7)	7 (6.9)	2.77 ± 1.22
12. Overweight is a major cause of hypertension.	16 (15.8)	32 (31.7)	18 (17.8)	29 (28.7)	6 (5.9)	2.77 ± 1.20
13. Hypertension causes complications in vital organs (heart, kidney, and eyes).	1 (1.0)	4 (4.0)	13 (12.9)	43 (42.6)	40 (39.6)	4.16 ± 0.87
14. Stroke is a major complication of hypertension.	0 (0.0)	0 (0.0)	7 (6.9)	37 (36.6)	57 (56.4)	4.50 ± 0.63
15. Green leafy vegetables and fruits are beneficial for people with hypertension.	5 (5.0)	20 (19.8)	21 (20.8)	44 (43.6)	11 (10.9)	3.36 ± 1.07
16. Junk foods (fatty foods, fast foods, beverages, and soft drinks) may contribute to hypertension.	2 (2.0)	4 (4.0)	10 (9.9)	58 (57.4)	27 (26.7)	4.03 ± 0.84
17. A healthy lifestyle is important for preventing hypertension.	9 (8.9)	8 (7.9)	15 (14.9)	50 (49.5)	19 (18.8)	3.61 ± 1.15
18. Regular blood pressure measurement is important for people with hypertension.	0 (0.0)	1 (1.0)	4 (4.0)	43 (42.6)	53 (52.5)	4.47 ± 0.63
Average score						3.58 ± 0.46

Preventive Practice on Hypertension among the Rural People

Table 3 presents the participants' preventive practices regarding hypertension. The overall mean preventive practice score was 2.55 ± 0.35 , indicating a moderate level of preventive practice. The highest mean

scores were observed for following the doctor's advice ($M = 3.15 \pm 0.92$), using condiments in cooking ($M = 3.10 \pm 1.04$), eating plenty of vegetables ($M = 2.95 \pm 0.95$), and avoiding extra salt ($M = 2.88 \pm 1.00$). In contrast, lower mean scores were found for smoking ($M = 1.60 \pm 0.96$), checking body weight regularly ($M = 2.22$

± 0.83), eating red meat ($M = 2.31 \pm 1.02$), eating enough fruits ($M = 2.35 \pm 0.85$), and engaging in physical exercise to maintain body weight ($M = 2.38 \pm 1.16$),

suggesting room for improvement in these preventive behaviors.

Table 3: Distribution of Preventive Practices Regarding Hypertension among rural people (N = 101)

Items	Never n (%)	Rarely n (%)	Sometimes n (%)	Always n (%)	Mean $\pm$ SD
1. I do physical exercise to maintain body weight.	32 (31.7)	22 (21.8)	24 (23.8)	23 (22.8)	2.38 ± 1.16
2. I smoke.	67 (66.3)	14 (13.9)	13 (12.9)	7 (6.9)	1.60 ± 0.96
3. I avoid extra salt.	14 (13.9)	15 (14.9)	41 (40.6)	31 (30.7)	2.88 ± 1.00
4. I check my weight regularly.	23 (22.8)	36 (35.6)	39 (38.6)	3 (3.0)	2.22 ± 0.83
5. I eat plenty of vegetables.	10 (9.9)	18 (17.8)	40 (39.6)	33 (32.7)	2.95 ± 0.95
6. I avoid fatty meals in my diet.	24 (23.8)	20 (19.8)	30 (29.7)	27 (26.7)	2.59 ± 1.12
7. I eat enough fruits.	18 (17.8)	37 (36.6)	39 (38.6)	7 (6.9)	2.35 ± 0.85
8. I like to use condiments in cooking.	9 (8.9)	19 (18.8)	23 (22.8)	50 (49.5)	3.10 ± 1.04
9. I eat red meat.	11 (10.9)	39 (38.6)	21 (20.8)	30 (29.7)	2.31 ± 1.02
10. I check my blood pressure regularly.	15 (14.9)	23 (22.8)	52 (51.5)	11 (10.9)	2.58 ± 0.88
11. I consult a healthcare provider.	19 (18.8)	18 (17.8)	52 (51.5)	12 (11.9)	2.56 ± 0.93
12. I follow the doctor's advice.	7 (6.9)	15 (14.9)	35 (34.7)	44 (43.6)	3.15 ± 0.92
Average score					2.55 ± 0.35

Relationship between Socio-Demographic Characteristics and Preventive Practice on Hypertension among the Rural People

Table 4 shows the relationships between socio-demographic characteristics, awareness, and preventive practices regarding hypertension. Preventive practice was significantly associated with age ($r = .286, p = .004$),

marital status ($t = 2.69, p = .010$), family history of hypertension ($t = 4.44, p < .001$), and awareness ($r = .464, p < .001$). However, gender, religion, educational level, occupation, and monthly family/individual income were not significantly associated with preventive practice ($p > .05$).

Table 4: Relationship between Socio-demographic Characteristics, Awareness, and Preventive Practices Regarding Hypertension among Rural People (N = 101)

Variables	Preventive Practice $M \pm SD$	r/t/F	p-value
Age (years)		.286	.004**
Gender			
Male	2.58 ± 0.37	1.06	.290
Female	2.50 ± 0.33		
Religion			
Hindu	2.54 ± 0.36	0.16	.690
Muslim	2.57 ± 0.35		
Marital Status			
Married	2.58 ± 0.36	2.69	.010*
Unmarried	2.36 ± 0.23		
Educational Level			
Illiterate	2.60 ± 0.33	1.82	.160
Primary	2.67 ± 0.44		
Secondary and above	2.51 ± 0.33		
Occupation			
Service holder	2.56 ± 0.30	0.88	.450
Business	2.57 ± 0.34		
Farmer	2.65 ± 0.44		
Housewife and others	2.49 ± 0.33		
Family History of Hypertension			
Yes	2.75 ± 0.33	4.44	< .001***
No	2.45 ± 0.32		
Monthly Family/Individual Income		-.075	.460
Awareness Score		.464	< .001***

Note. t = independent-samples t test; F = one-way analysis of variance (ANOVA); r = Pearson's correlation coefficient. Higher preventive practice scores indicate better preventive practices. $p < .05$ indicates statistical significance. $p < .05^*$, $p < .01^{**}$, $p < .001^{***}$.

DISCUSSION

Hypertension remains a major public health challenge worldwide and is a leading risk factor for cardiovascular morbidity and mortality. Improving awareness and promoting preventive practices are essential strategies for reducing the burden of hypertension, particularly in rural communities (Carey *et al.*, 2018; Kebede *et al.*, 2022). This study examined the awareness and preventive practices regarding hypertension among rural people in Bangladesh and explored the relationship between awareness, socio-demographic characteristics, and preventive practice.

Socio-Demographic Characteristics

The mean age of the participants was 41.23 ± 12.56 years, which is comparable to studies conducted in Malaysia and Bangladesh (Buang *et al.*, 2019; Chowdhury *et al.*, 2016). Most participants were male, married, had secondary or higher education, and had no family history of hypertension. Similar demographic characteristics have been reported in studies conducted in Bangladesh, Malaysia, and Iraq (Buang *et al.*, 2019; Rahman, 2018; Sadeq & Lafta, 2017). The relatively high proportion of participants with secondary or higher education may have contributed to the moderate level of awareness observed in the present study.

Awareness Regarding Hypertension

The present study found that rural people had a moderate level of awareness regarding hypertension ($M = 3.58 \pm 0.46$). This finding is consistent with studies conducted in Malaysia, Iraq, and Nepal, which also reported moderate awareness among adults (Basnet, 2024; Buang *et al.*, 2019; Sadeq & Lafta, 2017). This level of awareness may reflect increasing access to health information through healthcare providers, mass media, and community health education. Participants showed good awareness regarding regular blood pressure monitoring, stroke as a major complication of hypertension, excess salt intake, and hypertension-related organ damage. Similar findings have been reported in Pakistan, Malaysia, and India (Buang *et al.*, 2019; Kumar *et al.*, 2016; Naseem *et al.*, 2018). However, awareness was comparatively lower regarding overweight, family history, physical inactivity, and inadequate vegetable intake as risk factors. Similar knowledge gaps have been identified in previous community-based studies (Bashaar *et al.*, 2019; Kumar *et al.*, 2016). These findings suggest that future health education programs should place greater emphasis on modifiable lifestyle-related risk factors.

Preventive Practices Regarding Hypertension

The present study found a moderate level of preventive practice regarding hypertension ($M = 2.55 \pm 0.35$). This finding is comparable with studies conducted in Ethiopia and Bhutan, which also reported moderate adoption of healthy lifestyle behaviors (Dorji *et al.*, 2021; Smachew *et al.*, 2022). However, studies from Pakistan, Iraq, and India reported lower preventive

practice levels (Ahmad & Ahmad, 2015; Naseem *et al.*, 2018; Sadeq & Lafta, 2017). These differences may reflect variations in educational attainment, health literacy, and accessibility of healthcare services. Participants reported better adherence to physicians' advice, consumption of vegetables, and avoidance of excessive salt intake. Conversely, regular physical exercise, weight monitoring, fruit consumption, and routine blood pressure monitoring were practiced less frequently. Similar findings have been reported in Ethiopia and Pakistan, where awareness alone did not consistently translate into healthy lifestyle behaviors (Naseem *et al.*, 2018; Worku Kassahun *et al.*, 2020). This indicates that increasing awareness should be accompanied by behavioral interventions to improve preventive practices.

Relationship between Awareness, Socio-Demographic Characteristics, and Preventive Practice

A significant positive correlation was observed between awareness and preventive practice ($r = .464$, $p < .001$), indicating that participants with greater awareness were more likely to engage in hypertension preventive behaviors. This finding supports previous studies demonstrating that adequate awareness is an important determinant of healthy lifestyle practices and hypertension prevention (Buang *et al.*, 2019; Kebede *et al.*, 2022). The finding highlights the importance of community-based educational interventions to improve preventive behaviors among rural adults.

Among the socio-demographic variables, age was significantly associated with preventive practice. Older participants demonstrated better preventive practices than younger participants, possibly because increasing age is associated with greater perception of disease risk and more frequent interaction with healthcare services. Similar findings have been reported in Ethiopia and Malaysia (Buang *et al.*, 2019; Buda *et al.*, 2017; Smachew *et al.*, 2022).

Marital status was also significantly associated with preventive practice. Married participants demonstrated better preventive practices than unmarried participants, which may be explained by stronger family support and shared responsibility for maintaining health. Similar findings have been reported by Dorji *et al.*, (2021). Participants with a family history of hypertension reported significantly better preventive practices than those without such a history. Having an affected family member may increase awareness of hypertension-related complications and motivate individuals to adopt healthier behaviors. This finding agrees with studies conducted in Malaysia and Ethiopia (Buang *et al.*, 2019; Worku Kassahun *et al.*, 2020).

In contrast, gender, religion, educational level, occupation, and monthly family income were not significantly associated with preventive practice. This

suggests that awareness and perceived susceptibility to hypertension may have a greater influence on preventive behaviors than socio-demographic characteristics among rural adults. Overall, the findings suggest that although rural adults demonstrated moderate awareness and preventive practices regarding hypertension, important knowledge gaps and unhealthy lifestyle behaviors remain. The significant positive association between awareness and preventive practice indicates that strengthening community-based health education and promoting healthy lifestyle interventions may improve hypertension prevention and contribute to reducing the burden of hypertension among rural populations in Bangladesh.

CONCLUSION

Rural people in Bangladesh demonstrated moderate awareness and preventive practice regarding hypertension. Awareness was positively associated with preventive practice, indicating that individuals with greater awareness were more likely to adopt healthy preventive behaviors. Age, marital status, and family history of hypertension were significantly associated with preventive practice. Strengthening community-based health education may improve awareness and promote healthier lifestyles for hypertension prevention.

Recommendations

Community-based health education programs should be strengthened to improve awareness of hypertension and its modifiable risk factors. Regular blood pressure screening and lifestyle counseling should be promoted through primary healthcare services. Future studies should include larger, more representative samples and intervention designs to evaluate the effectiveness of educational programs.

Limitations

The cross-sectional design precluded causal inference, and the study's implementation in a single rural area may limit the generalizability of the findings. Additionally, self-reported responses may have been influenced by recall and social desirability bias.

Strengths

The study used validated instruments to assess hypertension awareness and preventive practices, thereby enhancing the reliability of the measurements. It also included a community-based rural sample, providing context-specific evidence to inform future research and public health interventions.

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