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Original Article

KNOWLEDGE, ATTITUDES, AND PRACTICES RELATED TO HYPERTENSION AMONG ADULT PEOPLE IN SELECTED AREAS OF UTTARA, DHAKA, BANGLADESH

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Abstract:

Background: *Hypertension often called a "silent killer", is a leading cause of cardiovascular diseases globally. This study focuses on the knowledge, attitude and practices (KAP) related to hypertension among adults in Uttara, Dhaka. Understanding the KAP of hypertension is essential to developing effective health interventions and promoting preventive measures to reduce hypertension-related morbidity and mortality in this area.*

Methods: *This descriptive cross-sectional study was conducted among 170 respondents selected by using simple random sampling method from areas of Dhaka North City and Dhaka South City Corporation. Relevant data were collected through face-to-face interview with the help of semi-structured questionnaire.*

Results: *Among the total 170 respondents from different locations in Uttara, Dhaka, with 31.8% being male and 68.2% female. Regarding association between socio-demographic characteristics and various KAP aspects related to hypertension. Age (18-35 years) and education (Bachelor's) were significantly associated with better knowledge, positive attitudes, and healthier practices regarding hypertension. Profession (service holders) and income (10000-20000 BDT) were also significantly linked to knowledge and practices. Regarding knowledge among the respondents while 78% of participants had good knowledge of hypertension and 93% display positive attitudes towards its prevention, only 38% engage in effective practices for prevention of condition.*

Conclusion: *This study offers valuable insights into the knowledge, attitudes, and practices (KAP) regarding hypertension among adult people in Uttara, Dhaka. Although attitudes toward hypertension prevention were generally positive, the findings suggest that individuals lack sufficient guidance and motivation to implement and sustain health behaviours about hypertension prevention and control.*

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Keywords:
Hypertension, knowledge, attitudes, practices, adult population.

Introduction:

Hypertension, a leading global health issue often referred to as a silent killer, poses serious public health risks, particularly in low- and middle-income countries. The World Health Organization identifies hypertension as a major risk factor for cardiovascular diseases, including heart disease and stroke, which are significant contributors to global morbidity and mortality (WHO, 2023). In Bangladesh, rapid urbanization and demographic transitions have escalated the prevalence of hypertension, posing challenges for the healthcare system (Islam, Mohiuddin, & Chowdhury, 2015). Research indicates a considerable gap in awareness about hypertension's

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risk factors, symptoms, and management practices among Bangladeshi adults, with misperceptions about causes and treatment affecting healthcare behaviours. Effective control of hypertension can significantly advance the Sustainable Development Goal focused on non-communicable diseases by reducing preventable deaths and improving health outcomes (Hossain, Suhel, & Rahman, 2022).While these insights underscore the importance of hypertension education, further study is needed to examine specific levels of knowledge, attitudes, and practices (KAP) regarding hypertension among adults in urban areas like Uttara, Dhaka. The number of people living with hypertension (blood pressure of ≥140 mmHg systolic or ≥90 mmHg diastolic or on medication) doubled between 1990 and 2019, from .65 billion to 1.3 billion (NCD Risk Factor Collaboration; NCD-RisC, 2021). This common, deadly health condition is a significant public health challenge that leads to stroke, heart attack, heart failure, kidney damage and many other health problems (Forouzanfar et al., 2017). A recent empirical study of 87 behavioural, environmental, occupational and metabolic risk factors revealed that high systolic blood pressure (e”110–115 mmHg) was the single most significant risk factor for early death worldwide, leading to an estimated 10.8 million avoidable deaths every year, and a burden of 235 million years of life lost or lived with a disability (disability-adjusted life years, DALYs) annually (GBD 2019 Risk Factors Collaborators, 2020).

This study, therefore, aims to assess the levels of knowledge, attitudes, and practices regarding hypertension among adults in Uttara, Dhaka. By focusing on this urban population, the research seeks to provide evidence-based insights for designing tailored public health interventions to improve hypertension prevention, awareness, and management of the treatment.

Methods:

This descriptive cross-sectional study was conducted the target population were the people residing within areas from sector no. 1 to sector no. 18 of Uttara Model Town, Dhaka, Bangladesh. The study was conducted over a period of 1 year from October 2023 to September 2024. Participants were selected using a simple random sampling method where each member of the subset has an equal probability of being chosen. Bangladeshi adult aged 18 years and above who resides in Uttara, Dhaka, were the study population. A total of 170 respondents were interviewed. A face-to-face structured interview was administered in the local Bengali language to all participants. The interview, administered in 25 to 30 minutes, using 18-itemed pre-validated semi-structured questionnaire of KAP on hypertension and sociodemographic variables. Comparison has been made between different socio-demographic characteristics and KAP on hypertension. The chi-square test and logistic regression were done as appropriate to see the statistical significance. Data gathered from the tools regarding KAP on hypertension will be descriptively analysed by the Statistical Package for Social Sciences (SPSS Inc., Chicago, IL, USA) software version ‘IBM SPSS Statistics 16’ in terms of frequencies, percentages and analyse. Information is presented in the form of graphs and charts mainly.

Results:

In Table-II shows that the majority of respondents demonstrated good knowledge of hypertension, with 78% knowing the normal blood pressure reading, 92.72% recognizing excessive salt intake as a risk factor, and 83.5% understanding that being overweight contributes to hypertension. Knowledge was generally higher among females than males across all categories.

In Table III reveals that a large proportion of respondents displayed positive attitudes towards hypertension prevention, with 93.52% considering regular blood pressure checking important, and 98.27% believing that regular exercise is beneficial for well-being. Male respondents demonstrated slightly lower positive attitudes compared to females in both categories.

In Table-IV discloses that hypertension among respondents was relatively low, with 74.70% avoiding fatty foods regularly, but only 31.18% frequently checking their body weight, and 37.65% engaging in regular physical exercise. Additionally, 15.3% of hypertensive respondents reported missing their hypertensive medication, and females showed better adherence to all practices compared to males.

In table V shows the association between socio-demographic characteristics and various KAP aspects related to hypertension. Age (18-35 years) and education (Bachelor’s) were significantly associated with better knowledge, positive attitudes, and healthier practices regarding hypertension. Profession (service

Table-I

Socio-demographic Characteristics of the respondents (n=170)

Socio-demographic Characteristics		Frequency	Percentage	Statistics	
Age Group (Year)	18-35	107	62.9	Mean	34.69 Years
	36-50	50	29.4	Median	32.00 Years
	51-65	11	6.5	Mode	28.00 Years
	>65	2	1.2	Std. Deviation	±10.10 Years
	Total	170	100%	Minimum	18 Years
				Maximum	67 Years
Sex	Male	54	31.8%		
	Female	116	68.2%		
Education	PSC	20	11.8%		
	SSC	22	12.9%		
	HSC	47	27.6%		
	Bachelor	67	39.4%		
	Postgrad	14	8.3%		
Profession	Service Holder	112	65.9%		
	Businessman	7	4.1%		
	Retired	5	2.9%		
	Others	46	27.1%		
Marital status	Married	139	81.8%		
	Unmarried	30	17.6%		
	Divorced	1	0.6%		
Monthly income	10000-20000BDT	39	22.9%		
	21000-40000BDT	47	27.6%		
	41000-60000BDT	12	7.2%		
	>61000 BDT	5	2.9%		
	NO/Not disclose	67	39.4%		

Table-II

Distribution of respondents regarding knowledge of hypertension.

Category	Response	Frequency	Percent	Male	Female
Do you know the normal blood	Yes	131	78.0%	26%	52%
pressure reading?	No	39	22.0%	5.88%	16.12%
Is excessive salt intake one of the	Yes	158	92.72%	30.58%	62.14%
risk factors for developing hypertension?	No	12	7.28%	1.40%	5.88%
Do you know overweight is one of the risk	Yes	142	83.5%	29.5%	54%
factors for developing high BP?	No	28	16.5%	2.35%	14.15%

Table-III

Distribution of respondents regarding attitudes of hypertension

Category	Response	Frequency	Percent	Male	Female
Do you think regular	Yes	159	93.52%	31.17%	62.35%
checking of BP is important?	No	11	6.48%	0.60%	5.88%
Should we exercise regularly	Yes	167	98.27%	31.80%	66.47%
for a healthy life?	No	3	1.8%	0.00%	1.8%

Table-IV

Distribution of respondents regarding the practices of hypertension

Category	Response	Frequency	Percent	Male	Female
Do you avoid fatty food	Yes	127	74.70%	24.70%	50%
consumption frequently?	No	43	25.3%	7.1%	18.2%
Do you check your body	Yes	53	31.18%	11.18%	20%
weight regularly?	No	117	68.82%	20.58%	48.24%
Do you perform physical	Yes	64	37.65%	12.94%	24.71%
exercise regularly?	No	106	62.35%	18.82%	43.53%
Do you miss your	Yes	26	15.3%	1.77%	13.53%
hypertensive medication?	No	17	10.0%	3.53%	6.47%

Table-V

Association Between Socio-demographic characteristics and KAP of hypertension

Variables	KAP Aspect	Chi-Square (χ^2)	p-value
Age (18-35 years)	Knowledge of Normal Hypertension Readings	17.957	0.000
Gender	Knowledge of Normal Hypertension Readings	0.876	0.349
Education (Bachelor's)	Knowledge of Normal Hypertension Readings	30.221	0.000
Profession (Service Holder)	Knowledge of Normal Hypertension Readings	29.472	0.000
Income (10000-20000 BDT)	Knowledge of Normal Hypertension Readings	15.533	0.004
Age (18-35 years)	Attitudes Towards Hypertension Prevention	21.372	0.001
Gender	Attitudes Towards Hypertension Prevention	3.154	0.076
Education (Bachelor's)	Attitudes Towards Hypertension Prevention	25.672	0.000
Profession (Service)	Attitudes Towards Hypertension Prevention	18.987	0.002
Income (10000-20000 BDT)	Attitudes Towards Hypertension Prevention	11.546	0.019
Age (18-35 years)	Practices for Hypertension Prevention	16.898	0.005
Gender	Practices for Hypertension Prevention	1.247	0.264
Education (Bachelor's)	Practices for Hypertension Prevention	28.113	0.000
Profession (Service)	Practices for Hypertension Prevention	22.681	0.001
Income (10000-20000 BDT)	Practices for Hypertension Prevention	14.029	0.007

holders) and income (10000-20000 BDT) were also significantly linked to knowledge and practices, indicating that individuals in these groups tend to engage more in hypertension Prevention. However, gender (male) showed no significant association across any KAP aspects, suggesting no notable differences in hypertension-related knowledge, attitudes, or practices based on gender.

In Figure 1 shows the gender distribution of the respondents. Among the 170 respondents, 116 (68%) were female and the rest 54 (32%) were male.

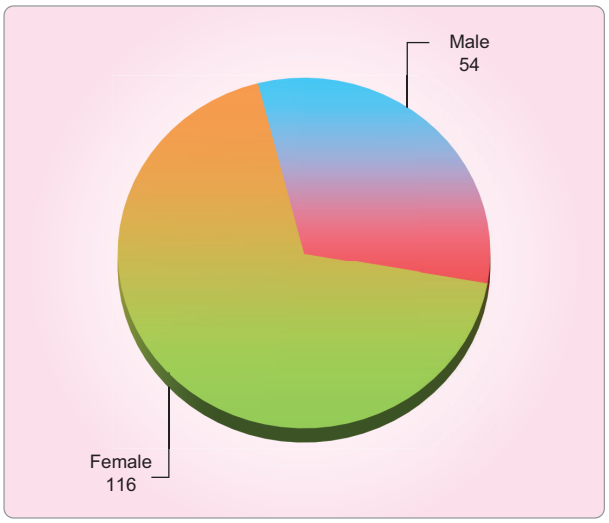

Figure 1: *Distribution of the respondents by gender (n= 170)*

In Figure 2 shows that while 78% of participants had good knowledge of hypertension and 93% display

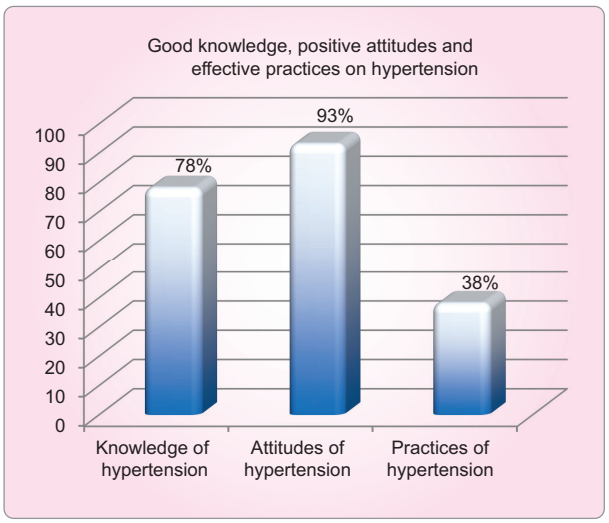

Figure 2: *Proportion of respondents with Good Knowledge, Positive Attitudes, and Effective Practices on Hypertension."*

positive attitudes towards its prevention, only 38% engage in effective practices for prevention of condition. This indicates a significant gap between awareness and actual behaviour, suggesting the need for interventions to promote better hypertension prevention practices.

Discussion:

This cross-sectional study examined the Knowledge, Attitudes, and Practices (KAP) related to hypertension among 170 adult respondents in Uttara, Dhaka. The findings demonstrate that socio-demographic characteristics such as age, education, profession, and income were significantly influenced hypertension-related KAP, similar to findings in other countries like Bangladesh and China. Respondents aged 18-35 years accounted for 62.9% of the sample, with this younger group showing superior knowledge of normal hypertension readings, where 78% of them could identify normal blood pressure. This aligns with a study (Rahman et al. 2018), where 62.5% of younger respondents aged 20-40 demonstrated high awareness of hypertension and actively sought preventive actions. In China another study similarly reported that 64.7% of respondents aged 18-39 years had better knowledge of hypertension, showing that younger adults tend to be more informed and likely to engage in preventive measures, driven by greater access to health information about hypertension (Gong et al. 2020).Respondents with a Bachelor's degree or higher represented 39.4% of the sample and consistently displayed better knowledge and healthier practices in prevention of hypertension. This is in line with (Rahman et al. 2018), who found that 45% of respondents with higher education in Bangladesh were more knowledgeable and proactive in managing their blood pressure. Similarly, (Gong et al. 2020) observed that in China, individuals with higher education were 70.1% more likely to adopt lifestyle changes and follow medical advice to manage hypertension, reinforcing the critical role education plays in chronic disease management. Occupation also played a significant role in hypertension KAP. In this study, 65.9% of respondents were service holders, and this group showed better knowledge and engagement in practices such as regular blood pressure monitoring. This mirrors findings from (Rahman et al. 2018), where service holders had higher rates of hypertension awareness and management, attributed to their access to healthcare resources and workplace wellness programs. Income

also had a notable impact, with 27.6% of respondents earning between 21,000-40,000 BDT showing higher knowledge and better practices for hypertension management. This supports the findings of (Rahman et al. (2018), where income was closely tied to health behaviours, with higher-income respondents showing better adherence to treatment and lifestyle changes. (Gong et al. 2020) reported that 68.5% of higher-income respondents in China were more consistent in following prescribed medical routines and making dietary adjustments. In both countries, income is a strong indicator of access to healthcare services and the ability to manage chronic conditions like hypertension. However, no significant gender differences were observed in hypertension-related KAP in this study, with both males (31.8%) and females (68.2%) displaying similar levels of knowledge and attitudes. This finding is consistent with (Gong et al. 2020), where gender did not significantly influence hypertension-related outcomes, suggesting that health behaviours related to hypertension are evenly distributed between men and women in these populations. Despite positive attitudes toward hypertension prevention, 93.5% of respondents considered regular blood pressure checks important but actual practices were lacking. Only 37.65% engaged in regular physical exercise, and just 31.18% monitored their body weight regularly. These results are consistent with (Gong et al. 2020), where respondents had high awareness of hypertension risks but only 40.2% engaged in regular physical activity. Similarly, (Rahman et al. 2018) reported that only 38.5% of respondents actively exercised, highlighting the gap between awareness and action.

Conclusion:

This study offers valuable insights into the knowledge, attitudes, and practices (KAP) regarding hypertension among adult people in Uttara, Dhaka. While many participants demonstrated basic awareness of hypertension, there were notable gaps in comprehensive understanding, particularly about risk factors and long-term complications. Public health strategies should focus on enhancing health education, improving healthcare accessibility, and developing community-based programs to prevent hypertension.

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