



Hypertension Prevalence and Treatment Adherence Among Urban Slum Population in Bangladesh: A Cross-Sectional Analysis to Inform Inclusive Urban Health Strategies

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1 Introduction

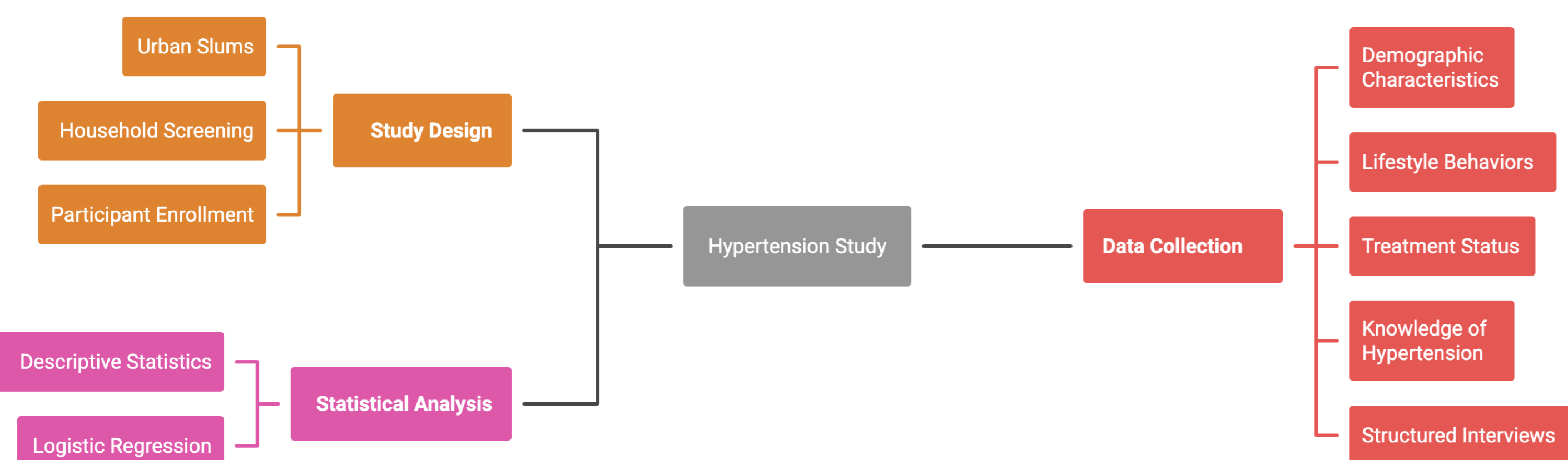
The prevalence of hypertension is rapidly advancing in low-and middle-income countries, including Bangladesh, due to ongoing nutritional transition from a traditional diet to processed and junk food, increasing trends of sedentary lifestyle, and reduced physical activity due to rapid unplanned urbanization. In Bangladesh, 27.4% of adults (18-95 years) have hypertension; 63% are unaware of their condition, only 31.15% receive treatment, and just 12.7% have controlled blood pressure.

Objective

To assess the prevalence of hypertension and identify key behavioral, socioeconomic, and knowledge-related factors influencing treatment adherence among slum residents in urban Bangladesh.

3 Method

A cross-sectional study was conducted in four urban slums of Dhaka, Bangladesh, selected according to local government guidelines. A total of 1,500 households were screened, from which 1,035 individuals with hypertension were identified and enrolled. Data were collected on demographic characteristics (age, gender, income), lifestyle behaviors (physical activity, diet), treatment status, and knowledge of hypertension. Structured group interviews were used to assess treatment adherence and barriers to care. Statistical analysis included descriptive statistics and logistic regression to identify factors associated with adherence to antihypertensive medication.



6 Acknowledgements

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7 References

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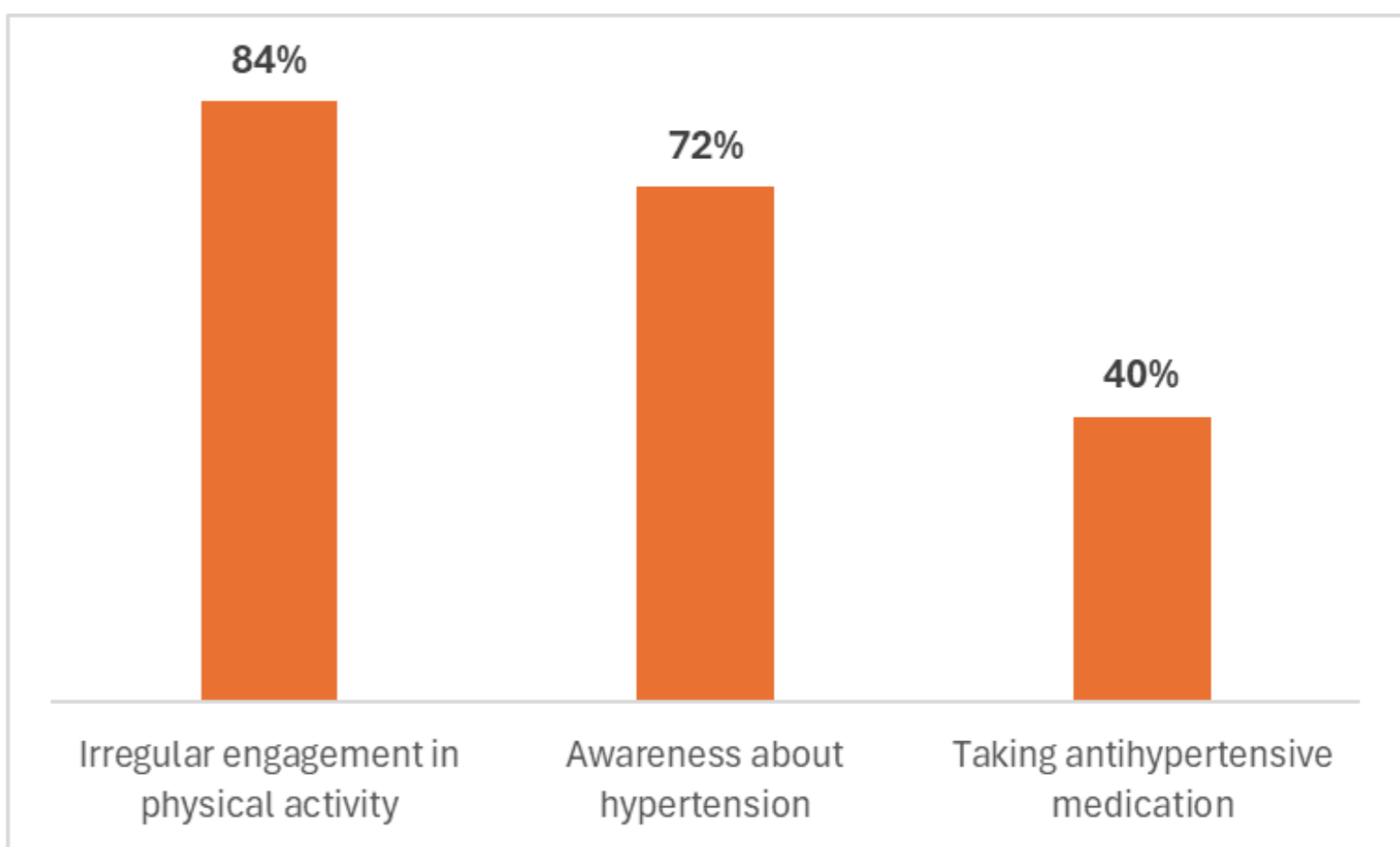
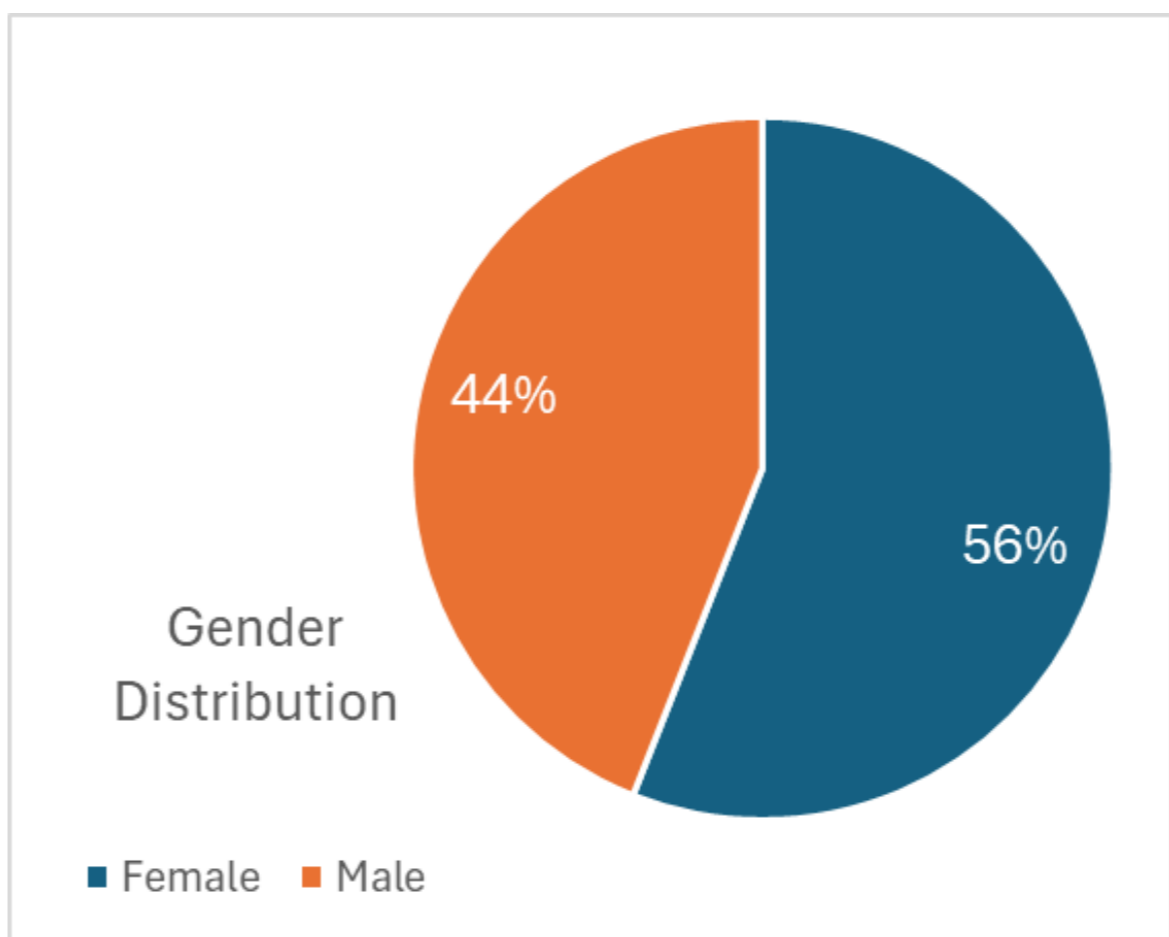
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4 Results

The mean age of participants was 49.8 years, with 56% identifying as female. The average monthly household income was 14,800 BDT (\$121.26). Financial constraints and lack of awareness were the most common barriers to adherence.

Logistic regression analysis revealed that treatment adherence was positively associated with older age (OR = 1.03, $p = 0.008$), male gender (OR = 1.55, $p = 0.004$), regular physical activity (3–4 days/week: OR = 2.10, $p = 0.012$; 5+ days/week: OR = 2.95, $p = 0.004$), and knowledge about hypertension (OR = 1.85, $p = 0.001$). Conversely, financial hardship, forgetfulness, and low health literacy were significantly associated with reduced adherence.



Category	Factor	Type	Prevalence / Association	Implication
Demographic	Older Age	Positive Factor	Adherent: Mean 53.5 yrs; Non-adherent: Mean 48.2 yrs	Prioritize older adults for adherence support
	Male Gender	Positive Factor	Adherent: 52%; Non-adherent: 44%	Tailor gender-sensitive outreach
Behavioral	Physical Activity (≥3 days/week)	Positive Factor	Adherent: 38%; Non-adherent: 19%	Promote community-based activity programs
	Hypertension Awareness	Positive Factor	Adherent: 68%; Non-adherent: 55%	Strengthen health literacy campaigns
Economic	Financial Constraints	Barrier	Reported by 42% of non-adherent group	Advocate for subsidized medication
Cognitive	Forgetfulness	Barrier	Reported by 15% of non-adherent group	Use reminders and caregiver support
Informational	Lack of Awareness	Barrier	Reported by 20% of non-adherent group	Target low-literacy populations with tailored content



5 Conclusions

Despite moderate awareness, hypertension treatment adherence remains low in urban slums due to financial hardship, limited physical activity, and poor health literacy. Community-based, affordable interventions and a stronger urban health system are urgently needed to improve NCD outcomes and resilience among the urban poor.