

RYKMDC Research Repository

Research Report |

Hypertension Screening in Rural Punjab: Mobile Health Camp Initiative to Screen and Educate Rural Populations About High Blood Pressure and Cardiovascular Risks

1. Introduction

Hypertension (high blood pressure) is a leading risk factor for cardiovascular disease and stroke, yet it remains ****underdiagnosed and poorly managed in rural Punjab****, where access to regular healthcare is limited. With an estimated ****30–40% of adults**** in rural areas affected by hypertension — mostly undiagnosed — there is an urgent need for community-based screening and awareness programs. This study evaluates a ****mobile health camp initiative**** conducted by RYK Medical College (RYKMDC) to screen, diagnose, and educate rural populations about hypertension and heart disease risks in remote villages of southern Punjab.

2. Objectives

- To conduct mass blood pressure screening in rural communities of southern Punjab.
- To identify individuals with undiagnosed or uncontrolled hypertension.
- To assess knowledge, attitudes, and practices (KAP) related to hypertension and heart health.
- To provide immediate counseling, referrals, and free medication where needed.
- To evaluate the effectiveness of mobile camps in increasing awareness and follow-up care.

3. Methodology

Study Design: Cross-sectional survey with screening and educational intervention.

Duration: 6 months

Study Area: 15 villages across Rahim Yar Khan, Muzaffargarh, and Dera Ghazi Khan districts.

Sample Size: 1,500 adults aged 30+ years.

Mobile Health Camp Structure:

- Camps held at local mosques, schools, and union councils.
- Staffed by RYKMDC faculty, medical students, and Lady Health Workers (LHWs).
- Services provided:
 - BP measurement (using calibrated digital sphygmomanometers)
 - Random blood glucose testing
 - Basic BMI and waist circumference assessment
 - Health education sessions in Punjabi/Saraiki
 - Distribution of informational leaflets

Data Collection:

- Demographic and medical history (age, gender, family history, smoking, diet).
- BP readings classified as normal, prehypertension, or hypertensive ($\geq 140/90$ mmHg).
- KAP questionnaire on hypertension awareness and prevention.

Follow-up: High-risk individuals referred to nearest Basic Health Unit (BHU) or district hospital; 3-month follow-up via phone call.

Analysis: SPSS for descriptive and inferential statistics.

4. Expected Findings

- **High Prevalence:** 35–40% of participants will have elevated BP, with >50% unaware of their condition.
- **Low Awareness:** <30% will know what hypertension is or its health risks.
- **Risk Factors:** High salt intake, physical inactivity, obesity, and tobacco use will be common.
- **Gender Gap:** Men more likely to have uncontrolled BP; women more likely to seek care once informed.
- **Impact of Education:** Immediate post-camp survey shows >70% improvement in knowledge.

5. Significance in the Rural Punjab Context

This initiative addresses a critical gap in preventive healthcare. Unlike urban clinics, rural areas lack:

- Regular screening programs
- Cardiovascular specialists
- Public awareness about silent killers like hypertension

The mobile camp model leverages:

- **Medical Students:** As frontline health educators and screeners.
- **Lady Health Workers:** Trusted community figures for follow-up.
- **Culturally Appropriate Messaging:** Using local language and religious venues for trust-building.

Findings will support the ****Punjab Health Department**** and ****Sehat Sahulat Program**** in scaling mobile screening as a national NCD (Non-Communicable Disease) prevention strategy.

6. Ethical Considerations

Informed consent will be obtained in Punjabi or Saraiki. The study will be reviewed by the RYKMDC Institutional Review Board (IRB). All data will be anonymized. Participants with high BP will receive counseling and referral slips. No one will be denied care.

7. Budget Estimate (Total: PKR 220,000)

Item	Estimated Cost (PKR)
Mobile Camp Equipment (BP Monitors, Glucometers)	60,000
Field Staff (Doctors, Students, LHWs)	70,000
Transportation (Van Rental, Fuel)	30,000
Educational Materials (Leaflets, Posters in Local Languages)	25,000

Medications (Free Samples for Immediate Needs)	20,000
Data Analysis & Reporting	15,000
Total	220,000

8. Conclusion

Hypertension is a silent epidemic in rural Punjab — but it is preventable and manageable with early detection and education. This mobile health camp initiative demonstrates a scalable, low-cost model for reaching underserved populations with life-saving screenings and awareness. By training future doctors to serve rural communities and empowering residents with knowledge, we can reduce cardiovascular disease burden and build a healthier, more equitable healthcare system for all.

Note: This research aligns with WHO's Global Hearts Initiative and supports Sustainable Development Goal 3.4 (Reduce premature NCD deaths by 1/3 by 2030).

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