MID-TERM EVALUATION OF MOBILE HEALTH UNITS (MHUs) FOR DELIVERY OF HEALTH SERVICES IN SELECTED GRAM PANCHAYATS OF JAIPUR DISTRICT

DISSERTATION PRESENTATION

Roshan Kumar
MBA-Development Management,
Enrolment Number: IIHMRU/10/2023-25/0049

FACULTY MENTOR	ORGANISATION MENTOR
Dr. HEMANTA KUMAR MISHRA, Assistant Professor, IIHMR University, Jaipur	Ms. Nishy Biswakarma Project Manager, Dhara-Sansthan, Jaipur

TABLE OF CONTENTS

CONTENT	SLIDE NUMBER
 RESULT	15
 CHALLENGES	29
 CONCLUSION	30
 RECOMMENDATIONS	31
 REFERENCES	

1.INTRODUCTION

1.1 Background and Rationale

- Over the last 20 years, India has initiated major public health reforms, particularly targeting rural and underserved regions.
- The National Rural Health Mission (NRHM), later part of the National Health Mission (NHM), was launched to reduce healthcare inequities.
- Mobile Health Units (MHUs) were introduced under this framework to deliver health services directly to remote areas.

1.2 Healthcare Gaps in Rural Rajasthan

- Rajasthan’s diverse geography and socio-economic conditions pose challenges for healthcare delivery in rural areas.
- Villages in Jaipur district face shortages of health staff, inadequate facilities, poor transport, and irregular services.
- Gram Panchayats often lack the resources and institutional capacity to manage healthcare effectively.

1.3 Role of Mobile Health Units

- MHUs operate as mobile clinics with medical staff and basic diagnostic tools to serve remote populations.
- They provide outpatient services, immunizations, maternal care, health screenings, and health education.
- In Jaipur's rural Gram Panchayats, MHUs help increase awareness, ensure early treatment, and ease pressure on static facilities.

1.4 Objectives of the Mid-Term Evaluation

- Assess the effectiveness of MHUs in selected Gram Panchayats of Jaipur district in service delivery and coverage.
- Measure beneficiary satisfaction, visit frequency, and coordination with health workers like ASHAs and ANMs.
- Evaluate MHU alignment with NHM goals and their reach to vulnerable groups (women, children, elderly, chronically ill).
- Examine the role of Panchayati Raj Institutions in planning, supporting, and monitoring MHU operations.

2. REVIEW LITERATURE

2.1 Mobile Health Units under the National Rural Health Mission (NRHM)

•MHUs were introduced under NRHM (2005) to deliver healthcare to underserved rural populations.

Table 1: Challenges in MHU Implementation under NRHM

Challenge	Details
Human Resources	Shortage of doctors and paramedics
Logistics	Irregular fuel supply, vehicle maintenance issues
Scheduling	Limited visit days, poor route planning
Integration	Weak coordination with PHCs/CHCs

2.2 Role of Panchayati Raj Institutions (PRIs)

•PRIs are constitutionally empowered to support village-level health initiatives.

Table 2: PRI Contributions to MHU Efficiency

Role	Impact
Mobilization	Boosts participation in MHU visits
Health Service Oversight	Improves accountability and service quality
Coordination with VHSCs	Supports grassroots planning and delivery
Referral Support	Ensures treatment continuity

2.3 Community Participation and Accountability

•ASHAsnd VHSCs are pivotal in MHU scheduling and community mobilization.

Table 3: Enablers vs. Barriers to Community Engagement

Enabler	Barrier
Well-publicized MHU Visits	Unpredictable visit timing
ASHA Involvement	Infrequent VHSC meetings
PRI-VHSNC Collaboration	Poor tracking of services and funds
Integration with Campaigns	Weak outreach to marginalized populations

2.4 Operational Gaps and Infrastructure Challenges

•Many MHUs lack GPS tracking, EMRs, and structured feedback systems.

Table 4: Operational and Infrastructure Limitations

Problem	Outcome
Road and Terrain Issues	Service delays and limited access
Lack of Digital Tools	No real-time tracking or patient records
Staff Shortages	Service overload and reduced care quality
Poor Data Collection	Ineffective planning and evaluation

2.5 PROBLEM STATEMENT

- Access Gaps Remain: Despite NRHM and MHU deployment, rural areas like Jaipur District still face major gaps in primary healthcare access.
- Staff & Infrastructure Issues: MHUs suffer from shortages of medical staff, inadequate infrastructure, irregular services, and weak integration with fixed health centers.
- Governance Disconnect: There is poor coordination between NRHM systems and local governance, reducing efficiency and accountability.
- Underutilized PRIs: Panchayati Raj Institutions (PRIs) have the mandate but are not effectively involved due to limited training and political barriers.
- Low Community Engagement: Weak community participation, irregular scheduling, and lack of monitoring reduce MHU impact.
- Need for Evaluation: A mid-term evaluation in Jaipur Gram Panchayats is essential to assess MHU performance and recommend strategies for stronger stakeholder coordination and service delivery.

3.RATIONALE

- Persistent Rural Health Gaps: Despite NRHM/NHM efforts, rural areas like Jaipur's Gram Panchayats continue to face poor infrastructure, limited awareness, and long distances to health services—resulting in inequitable health outcomes.

- Human Resource Shortages: Critical shortages of trained personnel, especially female doctors and support staff, weaken the delivery of maternal and child healthcare in underserved areas

- Strategic Role of MHUs: Mobile Health Units (MHUs) were introduced under NRHM to bring basic health services—like ANC, immunization, and health education—to remote communities, acting as mobile PHCs.

- Underdocumented Effectiveness: The impact of MHUs at the Gram Panchayat level—especially in Jaipur—is not well studied, leaving a gap in evidence-based planning and service evaluation.

- Untapped Potential of PRIs: Panchayati Raj Institutions (PRIs), though constitutionally empowered to manage local health initiatives, often lack training and support to effectively coordinate with MHUs

- Need for Gram Panchayat-Level Evaluation: Most evaluations are done at state or district level, ignoring micro-level dynamics such as community participation, VHSC activity, and local accountability mechanisms.

4. OBJECTIVES

- Assess the reach and service coverage of MHUs in selected Gram Panchayats of Jaipur.
- Examine the involvement of PRIs, VHSCs, ASHAs, and AWWs in supporting MHU operations.
- Identify key operational and systemic challenges affecting MHU efficiency.
- Recommend strategies to improve MHU performance and impact on rural health outcomes.

5 .RESEARCH QUESTIONS

- Are the Mobile Health Units (MHUs) able to satisfy the basic healthcare needs of the rural communities located in the selected GPs of the Jaipur district?
- How are the roles and responsibilities divided between Dhara Sansthan and the Mobile Health Units (MHUs), and how does this collaboration influence community health outcomes?
- Which service delivery challenges do MHUs experience in their work and what important parts should be improved to increase access, coverage and efficiency?

6. METHODOLOGY

Section	Details
6.1 Study Design	• Descriptive and explorative mid-term evaluation to assess outreach, effectiveness, and challenges of MHUs in Gram Panchayats of Jaipur district. • Uses a blended methodology (quantitative + qualitative). • Descriptive component profiles service patterns; exploratory design uncovers challenges, community views, and institutional bottlenecks.
6.2 Study Area	• Conducted in villages under 6 Gram Panchayats of Jaipur district, Rajasthan, where MHUs are operated by Dhara Sansthan in coordination with the public health department. GPs selected for diversity in geography, demographics, and community representation.
6.3 Sampling Strategy	• Sample size: 210 beneficiaries selected from operational records (Jan 2022–Dec 2023). • Sampling: Proportionate to Population Size (PPS) for equitable village distribution. • Simple random sampling used from beneficiary lists to avoid bias. • Stakeholders (e.g., ASHAs, MHU staff, Dhara Sansthan officials) purposively selected for in-depth interviews.

6.4 Data Collection Methods	Primary & Secondary Data: • Secondary: MHU annual records and logs (disease-wise service use, frequency, coverage). • Quantitative: Structured questionnaire with 210 beneficiaries to gather data on service frequency, access, quality, satisfaction, and outcomes. • Qualitative: In-depth interviews; content and narrative analysis used.
6.5 Data Analysis	Mixed-methods approach: • Quantitative data analyzed via MS Excel for frequency, percentage, GP-wise comparison. • Results presented in tables and graphs, supported by qualitative excerpts.
6.6 Timeline Planning	**Phase 1: Preparation & Design** • Chapters: Introduction, Review of Literature, Research Methodology • Activities: Topic finalization, literature review, tool design **Phase 2: Fieldwork & Documentation** • Chapters: Profile of Study Area & Dhara Sansthan, Data Collection & Observations **Phase 3: Analysis, Writing & Submission** • Chapters: Analysis & Discussion, Conclusion & Recommendations, Annexures & Bibliography • Activities: Data analysis, synthesis with objectives/literature, report drafting, final submission

7. CASE STUDY

7.1 Background

- The NRHM launched MHUs in 2005 to improve healthcare access in rural and remote areas.
- MHUs deliver services like OPD consultations, maternal-child care, and preventive interventions.
- In Jaipur's Gram Panchayats, MHUs supplement fixed facilities where PHCs/CHCs are insufficient or inaccessible.
- Despite this design, on-ground challenges such as limited coverage, service quality gaps, and weak community involvement persist.

7.2 Objectives of the Case Study

- To evaluate the reach and quality of health services provided by MHUs in selected Gram Panchayats.
- To identify operational and systemic challenges hindering MHU performance.
- To examine the involvement of PRIs and VHSCs in planning, delivery, and monitoring.
- To suggest evidence-based recommendations for improving MHU efficiency and responsiveness.

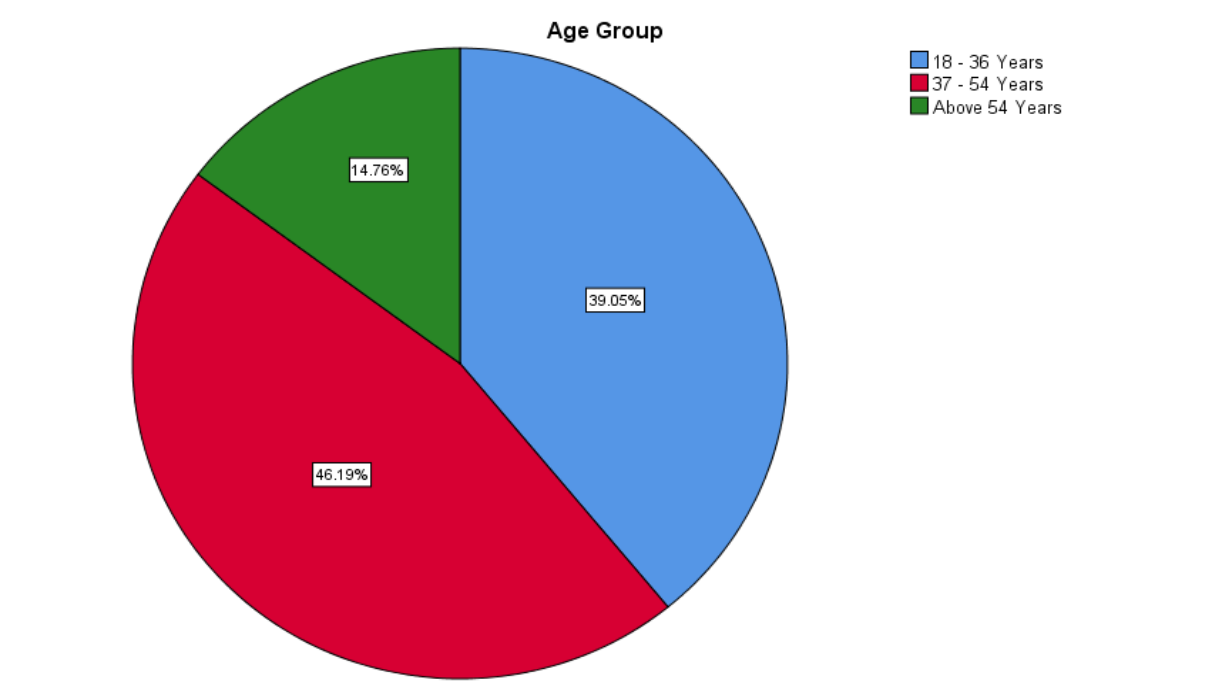
7.3 Methodology

- A mixed-method approach using both qualitative and quantitative tools was employed.
- Data sources included NRHM documents, government reports, academic studies, and field visits.
- Fieldwork covered 8–10 Gram Panchayats in Jaipur where MHUs have been active for over a year.
- Semi-structured interviews were held with MHU staff, ASHAs, ANMs, PRI members, and beneficiaries for firsthand insights.

8. RESULT

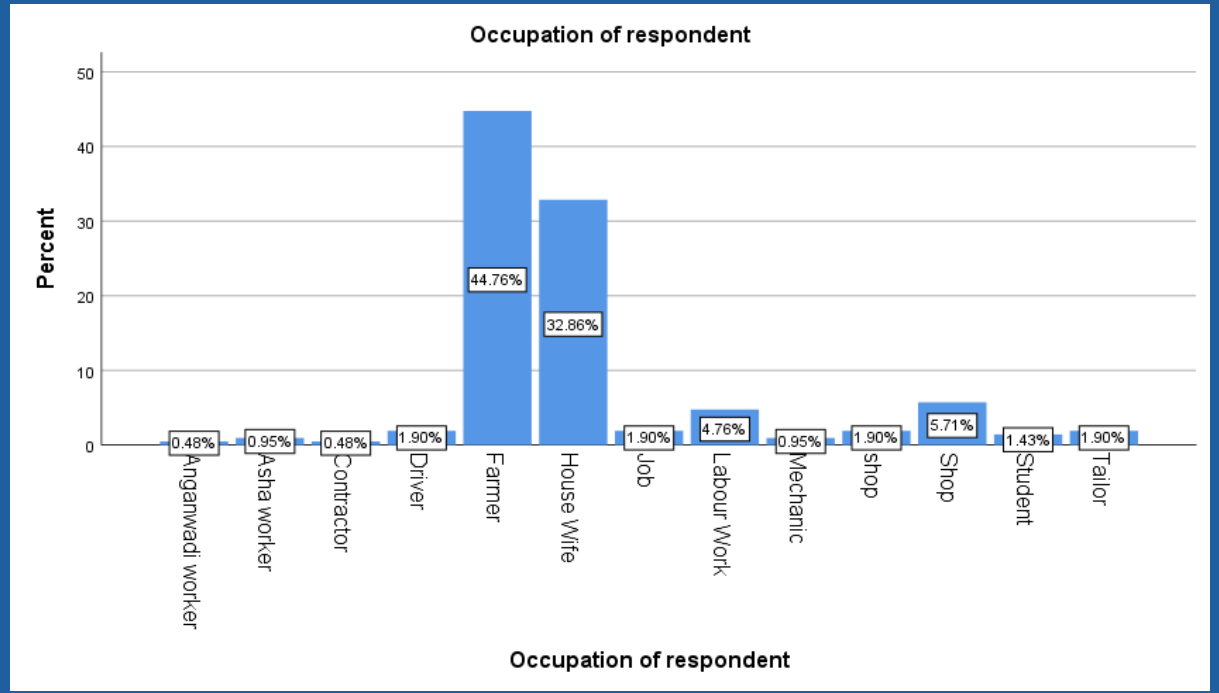
- MHUs delivered basic services like outpatient care, immunizations, antenatal check-ups, and health education.
- Service delivery was inconsistent due to irregular schedules, unpredictable routes, and no GPS tracking.
- Most Gram Panchayats lacked fixed service points, reducing accessibility and visibility of MHUs.
- There were critical shortages of doctors and trained paramedics, limiting the range of care provided.
- Community participation was low, with inactive VHSCs and minimal involvement from PRI members.
- Though some health indicators improved in regularly served areas, overall impact remained limited due to poor coordination and governance.
- Beneficiaries often lacked prior information about MHU visits, leading to low turnout and missed healthcare opportunities.
- Monitoring and evaluation mechanisms were weak, with little documentation of service quality or patient follow-up outcomes

Figure_1 Graphical Representation of Respondents by Age Group



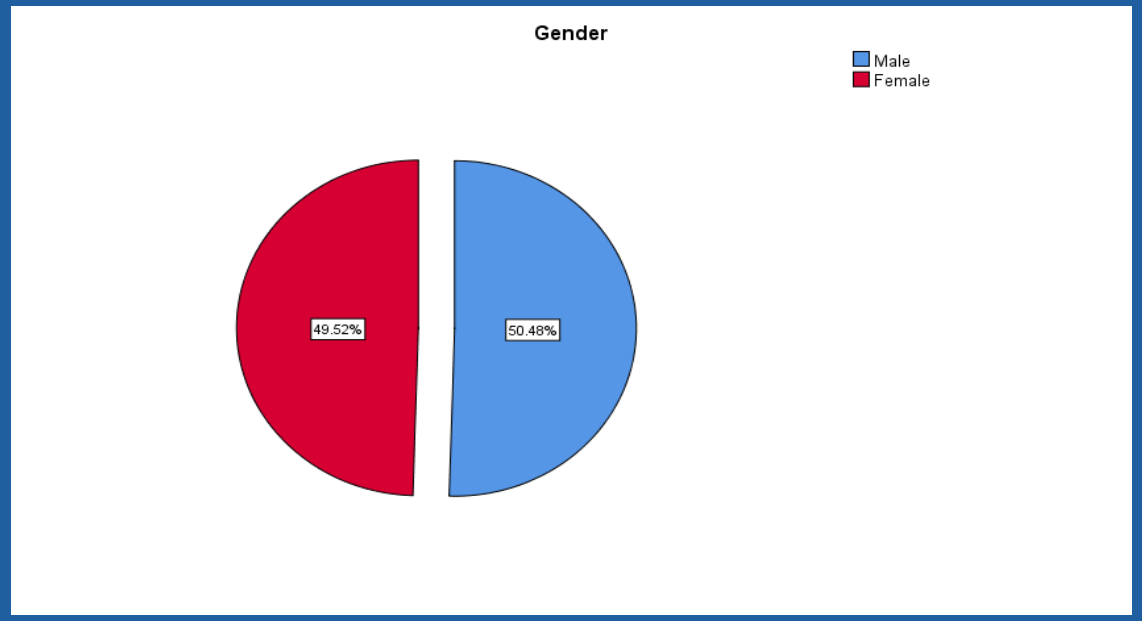
- The highest proportion of participants (46.19%) falls within the 37–54 years age group.
- The 18–36 years category represents 39.05% of the total respondents.
- Only 14.76% of participants are aged above 54 years, making it the smallest group.
- The age distribution indicates a dominant presence of middle-aged individuals in the study sample.

Figure_2 Graphical Representation of Respondents' Occupations



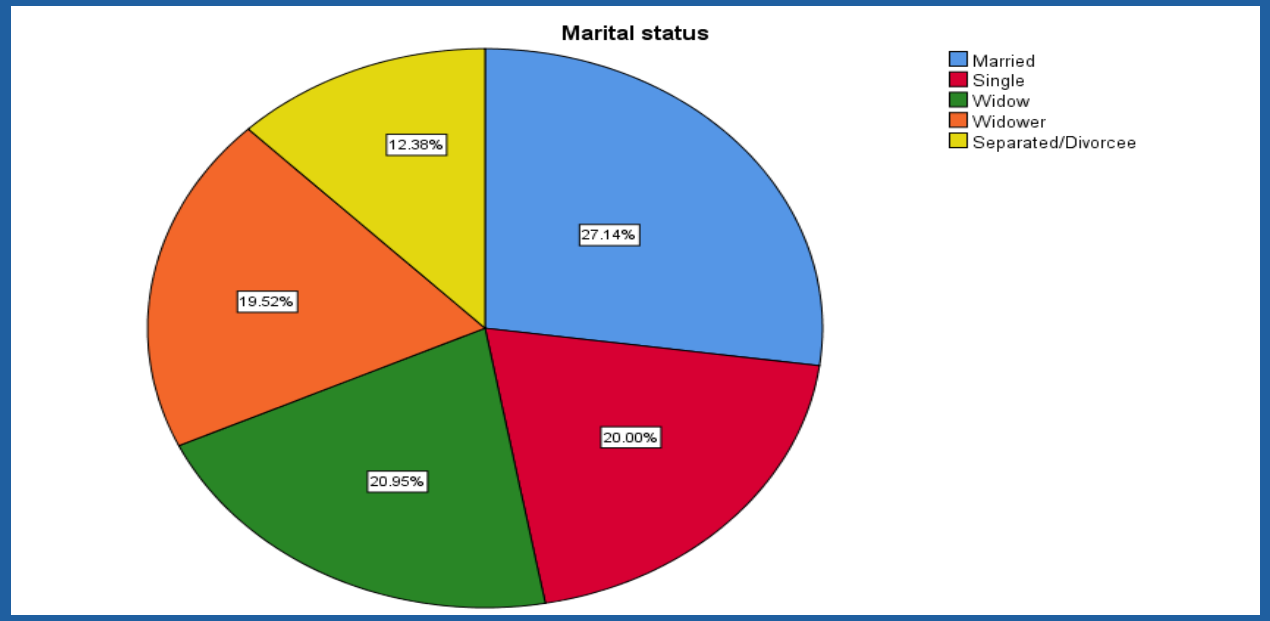
- Farming is the dominant occupation, with 44.76% of respondents engaged in agriculture.
- Housewives form the second-largest group, comprising 32.86% of the sample.
- Other occupations like shopkeeping (5.71%) and labor work (4.76%) are present in smaller proportions.
- There is minimal occupational diversity, indicating a primarily rural, agrarian community with limited involvement in skilled or formal sectors.

Figure_3 Graphical Representation of Gender Distribution



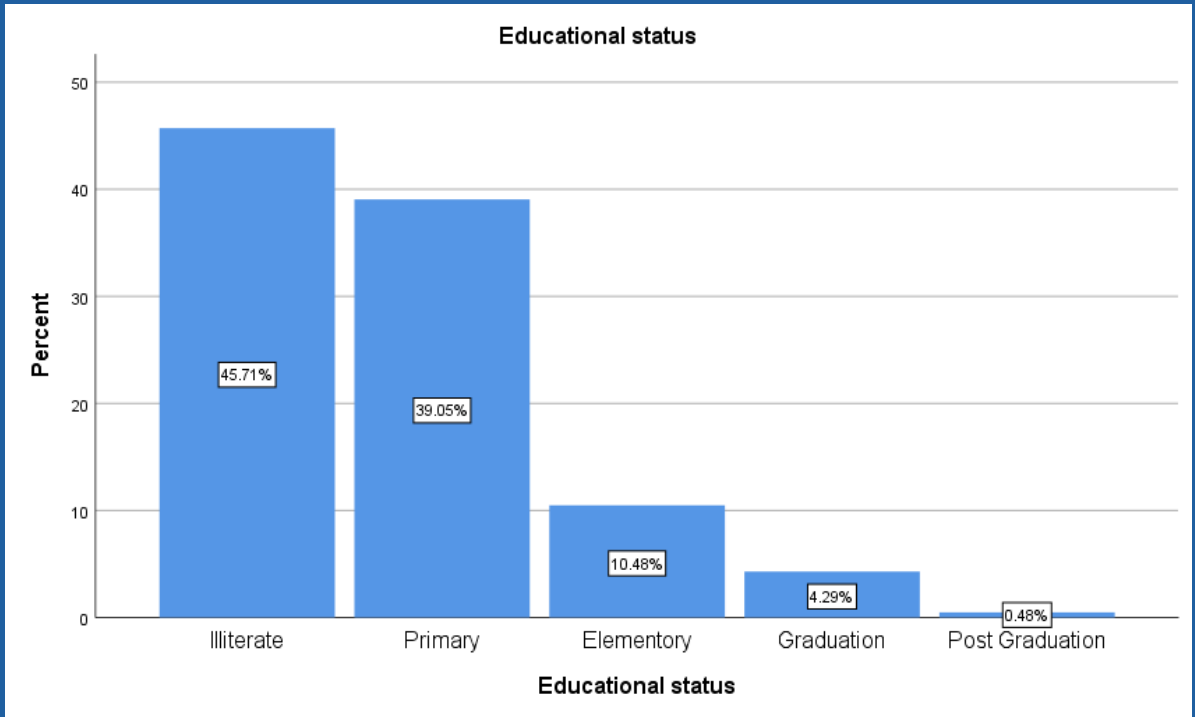
- Gender distribution is nearly equal, with males at 50.48% and females at 49.52%.
- Balanced representation ensures inclusivity, allowing for gender-sensitive analysis.
- No significant gender skew was observed, strengthening the study's demographic reliability.
- The data reflects equitable participation, enhancing the generalizability of findings across genders.

Figure_4 Graphical Representation of Marital Status



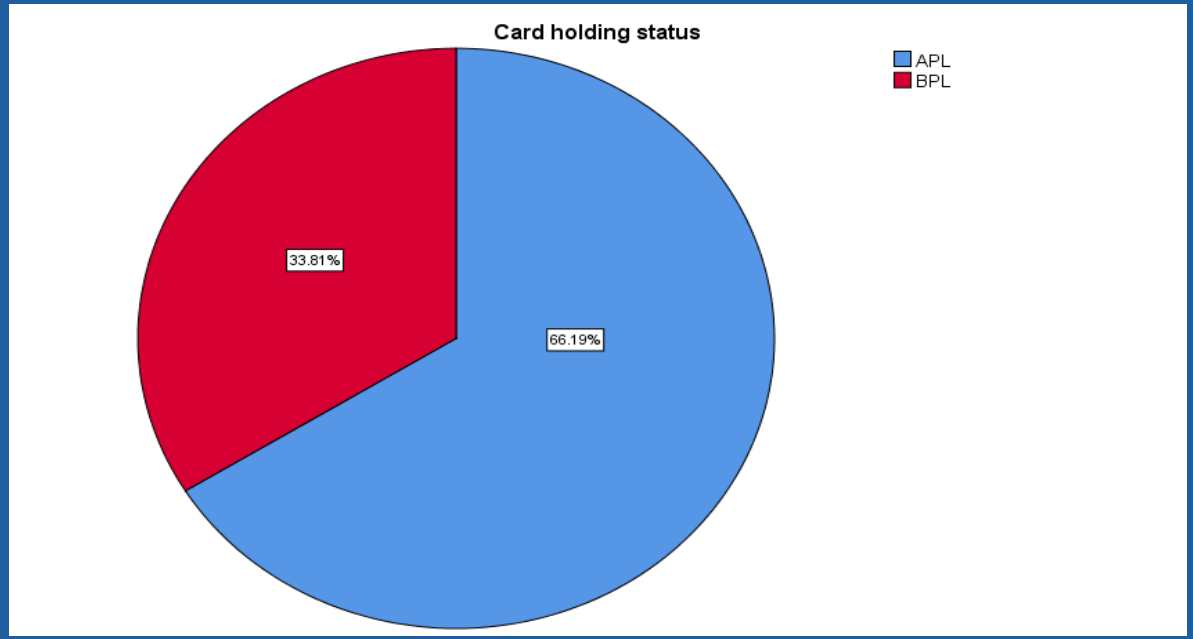
- Married individuals form the largest group at 27.14% of the sample.
- Widows (20.95%) and singles (20.00%) represent significant proportions, indicating diverse life circumstances.
- Widowers account for 19.52%, suggesting considerable male spousal loss in the study population.
- 12.38% are separated or divorced, highlighting the inclusion of participants with complex marital backgrounds.

Figure_5 Graphical Representation of Educational Status



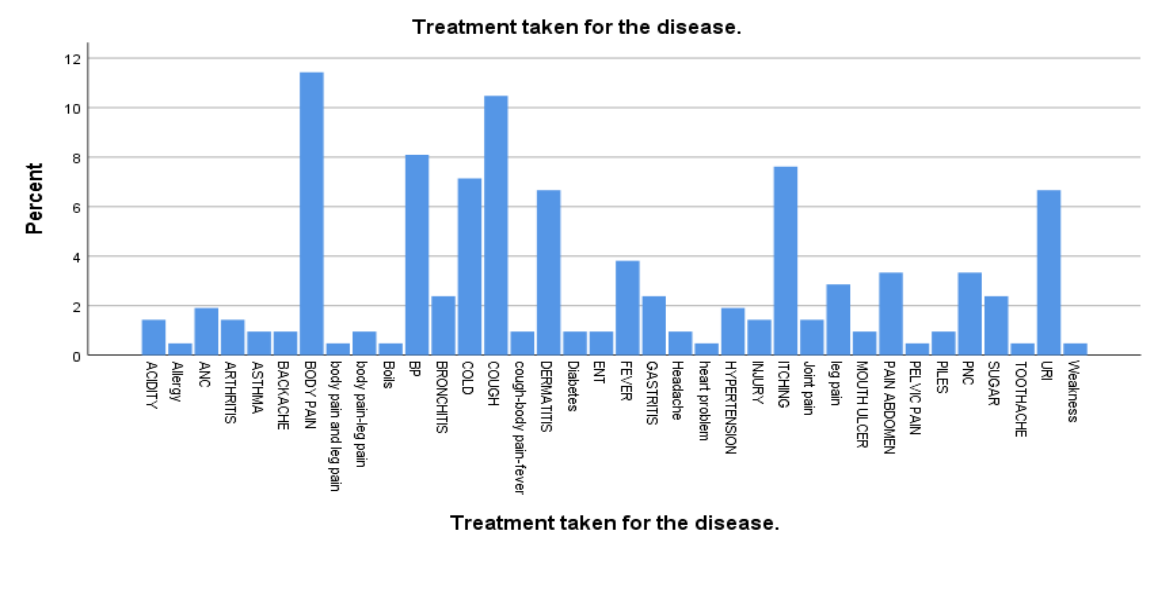
- Illiteracy is high, with 45.71% of respondents having no formal education.
- Primary education is the second most common level, attained by 39.05% of the sample.
- Only 10.48% have completed elementary education, reflecting a steep drop-off beyond basic schooling.
- Higher education is rare, with just 4.29% graduates and only 0.48% postgraduates, indicating limited access to advanced education.

Figure_6 Card Holding Status of Respondents



- A majority of respondents (66.19%) hold APL ration cards, indicating they are above the poverty line.
- 33.81% of the sample possess BPL cards, identifying them as economically disadvantaged.
- The socioeconomic profile reveals that two-thirds of the participants are relatively better off, potentially with greater access to resources.
- The presence of one-third BPL respondents highlights persistent economic vulnerability among a significant portion of the study population.

Figure_7 Graphical Representation of Diseases for Which Treatment Was Sought



Body pain was the most common complaint (11.4%), followed by cough (10.5%), blood pressure issues (8.1%), and itching (7.6%).

Cold, URI, dermatitis, and fever were also frequently reported, indicating a focus on treating minor infections and seasonal illnesses.

A range of non-communicable conditions such as diabetes, hypertension, and gastritis were present, though in smaller numbers.

Table 1. ANOVA Analysis of MHV Services and Patient Satisfaction Across Age Groups

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Services provided by MHV	Between Groups	6.571	2	3.286	.962	.384
	Within Groups	707.124	207	3.416		
	Total	713.695	209			
The level of satisfaction of villagers/ patients	Between Groups	9.063	2	4.532	1.460	.235
	Within Groups	642.461	207	3.104		
	Total	651.524	209			

- No significant difference was found in the perception of MHV services across age groups (p-value = 0.384 > 0.05).
- Satisfaction levels among villagers/patients also did not vary significantly by age (p-value = 0.235 > 0.05).
- This suggests that MHV services are perceived positively and uniformly across all age demographics.

Table 2. Descriptive Statistics of Services Provided by MHV and Level of Satisfaction Across Age Groups

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Services provided by MHV	18 - 36 Years	82	33.7317	1.67073	.18450	33.3646	34.0988	30.00	36.00
	37 - 54 Years	97	33.3711	1.95959	.19897	32.9762	33.7661	27.00	36.00
	Above 54 Years	31	33.7097	1.93552	.34763	32.9997	34.4196	30.00	36.00
	Total	210	33.5619	1.84792	.12752	33.3105	33.8133	27.00	36.00
The level of satisfaction of villagers/patients	18 - 36 Years	82	30.1220	1.86845	.20634	29.7114	30.5325	23.00	32.00
	37 - 54 Years	97	30.5567	1.68306	.17089	30.2175	30.8959	24.00	32.00
	Above 54 Years	31	30.5161	1.71018	.30716	29.8888	31.1434	26.00	32.00
	Total	210	30.3810	1.76560	.12184	30.1408	30.6211	23.00	32.00

- High satisfaction levels were reported across all age groups for MHV services, with mean scores nearing the maximum of 36.
- Young adults (18–36 years) reported the highest satisfaction with MHV services (mean: 33.73), followed closely by older adults above 54 years (33.71).
- Overall healthcare satisfaction was also high, with an average mean of 30.38 out of 32 across all age groups.
- The 37–54 years group showed the highest satisfaction with healthcare services (mean: 30.56), indicating strong service perception among the middle-aged.
- Low standard deviations across groups indicate consistent responses and minimal variation in satisfaction levels among respondents.

Table 3. Group Statistics Based on Gender for MHV Services and Satisfaction Levels

Group Statistics					
	Gender	N	Mean	Std. Deviation	Std. Error Mean
Services provided by MHV	Male	106	33.1132	1.83262	.17800
	Female	104	34.0192	1.75699	.17229
The level of satisfaction of villagers/patients	Male	106	30.3868	1.80777	.17559
	Female	104	30.3750	1.73030	.16967

- Females reported slightly higher satisfaction with MHV services (mean score of 34.02) than males (33.11), indicating a marginally more positive perception.
- Overall satisfaction levels were nearly identical between genders—30.39 for males and 30.38 for females—showing balanced service impact.
- Low standard deviations in both categories suggest that responses were consistent within each gender group, reflecting uniform experiences.

Table 4. Cross-tabulation of Age Group and Type of Family

Crosstab					
Count					
		Type of family			
		Joint	Extended	Nuclear	Total
Age Group	18 - 36 Years	0	8	74	82
	37 - 54 Years	10	81	6	97
	Above 54 Years	30	1	0	31
Total		40	90	80	210

- Younger respondents (18–36 years) predominantly live in nuclear families (90.2%), reflecting a generational shift toward smaller household units.
- Middle-aged individuals (37–54 years) are mostly part of extended families (83.5%), suggesting they hold central caregiving or economic roles.
- Older adults (above 54 years) are primarily found in joint family setups (96.8%), indicating adherence to traditional multigenerational living.

Table 5. Independent Samples t-Test Based on Gender for MHV Services and Satisfaction

Independent Samples Test						
			Services provided by MHV		The level of satisfaction of villagers/patients	
			Equal variances assumed	Equal variances not assumed	Equal variances assumed	Equal variances not assumed
Levene's Test for Equality of Variances	F		2.189		1.046	
	Sig.		.140		.308	
t-test for Equality of Means	t		-3.656	-3.657	.048	.048
	df		208	207.890	208	207.874
	Sig. (2-tailed)		.000	.000	.962	.962
	Mean Difference		-.90602	-.90602	.01179	.01179
	Std. Error Difference		.24782	.24772	.24427	.24417
	95% Confidence Interval of the Difference	Lower	-1.39459	-1.39439	-.46977	-.46957
		Upper	-.41746	-.41765	.49336	.49316

- Females perceive MHV services more positively than males, as shown by a statistically significant difference ($p = 0.000$).
- The gender difference in perception is meaningful, indicating that women may feel more benefited or better served by MHVs.
- There is no significant gender difference in overall satisfaction with healthcare services ($p = 0.962$).
- Both males and females report nearly equal satisfaction levels, suggesting that service quality is generally consistent across genders.
- Statistical analysis confirms perception and satisfaction are not always correlated, with perception varying but satisfaction remaining stable.

Table 6. Chi-Square Test of Association Between Age Group and Type of Family

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	283.826[a]	4	.000
Likelihood Ratio	270.280	4	.000
Linear-by-Linear Association	164.318	1	.000
N of Valid Cases	210		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.90.

- There is a statistically significant association between age group and family structure (Chi-Square = 283.826, p = 0.000), confirming that family type distribution varies by age.
- Younger individuals tend to live in nuclear families, while older respondents are more likely to live in joint family systems, indicating a clear generational shift.
- All test assumptions are met, with no expected cell counts below 5, strengthening the reliability of the statistical results.

Table 7. Descriptive Statistics for MHV Services and Patient Satisfaction

Descriptive Statistics			
	Mean	Std. Deviation	N
Services provided by MHV	33.5619	1.84792	210
The level of satisfaction of villagers/patients	30.3810	1.76560	210

- Respondents rated MHV services very positively, with a high mean score of 33.56 out of 36, indicating strong perceived service quality.
- Satisfaction with healthcare services was also high, with a mean of 30.38 out of 32, reflecting widespread approval among the community.
- Low standard deviations (1.85 and 1.77) suggest consistent responses across participants, reinforcing the reliability of positive feedback.

Table 8. Correlation Between MHV Services and Level of Satisfaction

Correlations			
		Services provided by MHV	The level of satisfaction of villagers/patients
Services provided by MHV	Pearson Correlation	1	.290**
	Sig. (2-tailed)		.000
	N	210	210
The level of satisfaction of villagers/patients	Pearson Correlation	.290**	1
	Sig. (2-tailed)	.000	
	N	210	210
**. Correlation is significant at the 0.01 level (2-tailed).			

- There is a moderate positive correlation (r = 0.290) between the quality of MHV services and patient satisfaction.
- The relationship is statistically significant (p = 0.000), indicating it is not due to random chance.
- Higher perceived service quality is linked to higher satisfaction, emphasizing the importance of service delivery in shaping community perceptions.

Table 9. Regression Analysis: Predicting MHV Services Based on Satisfaction Levels

Model		Sum of Squares	df		F	Sig.
1	Regression	60.202	1	60.202	19.162	.000[b]
	Residual	653.494	208	3.142		
	Total	713.695	209			
a. Dependent Variable: Services provided by MHV						
b. Predictors: (Constant), The level of satisfaction of villagers/patients						

- A statistically significant relationship exists between satisfaction levels and perception of MHV services (F = 19.162, p = 0.000).
- Satisfaction significantly predicts perceptions of MHV service quality.
- The regression model explains a modest portion of the variance (regression sum of squares = 60.202 out of 713.695).
- Higher satisfaction is linked with better service perception, reinforcing satisfaction as a key influencer in community evaluations.

Table 10. Regression Coefficients: Impact of Satisfaction on Perception of MHV Services

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	24.327	2.113		11.511	.000
	The level of satisfaction of villagers/patients	.304	.069	.290	4.377	.000
a. Dependent Variable: Services provided by MHV						

- Satisfaction is a significant positive predictor of MHV service perception ($p = 0.000$, $t = 4.377$).
- Each one-unit increase in satisfaction raises the MHV service score by 0.304 units ($B = 0.304$).
- The standardized beta coefficient ($\beta = 0.290$) shows a moderate positive effect.
- The intercept of 24.327 reflects the baseline perception when satisfaction is zero.

Table 11. ANOVA Results for MHV Services and Satisfaction Across Family Types

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Services provided by MHV	Between Groups	5.652	2	2.826	.826	.439
	Within Groups	708.043	207	3.420		
	Total	713.695	209			
The level of satisfaction of villagers/patients	Between Groups	15.306	2	7.653	2.490	.085
	Within Groups	636.218	207	3.074		
	Total	651.524	209			

- There is no statistically significant difference in MHV service perception across different family types ($p = 0.439$).
- Satisfaction levels also do not vary significantly by family structure ($p = 0.085$), indicating that family type does not impact healthcare satisfaction.

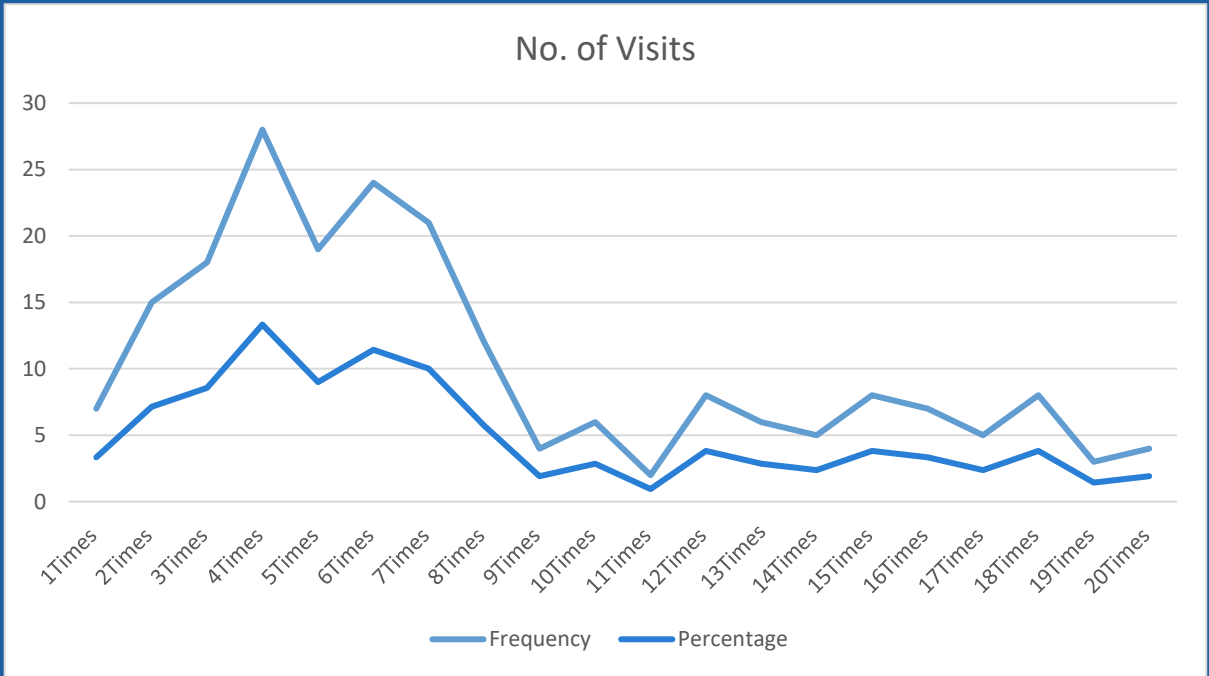
Table 12. Descriptive Statistics of MHV Services and Satisfaction Across Family Types

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Services provided by MHV	Joint	40	33.3500	2.01977	.31935	32.7040	33.9960	30.00	36.00
	Extended	90	33.4778	1.93273	.20373	33.0730	33.8826	27.00	36.00
	Nuclear	80	33.7625	1.65540	.18508	33.3941	34.1309	30.00	36.00
	Total	210	33.5619	1.84792	.12752	33.3105	33.8133	27.00	36.00
The level of satisfaction of villagers/patients	Joint	40	30.6250	1.67466	.26479	30.0894	31.1606	26.00	32.00
	Extended	90	30.5778	1.68255	.17736	30.2254	30.9302	24.00	32.00
	Nuclear	80	30.0375	1.86537	.20855	29.6224	30.4526	23.00	32.00
	Total	210	30.3810	1.76560	.12184	30.1408	30.6211	23.00	32.00

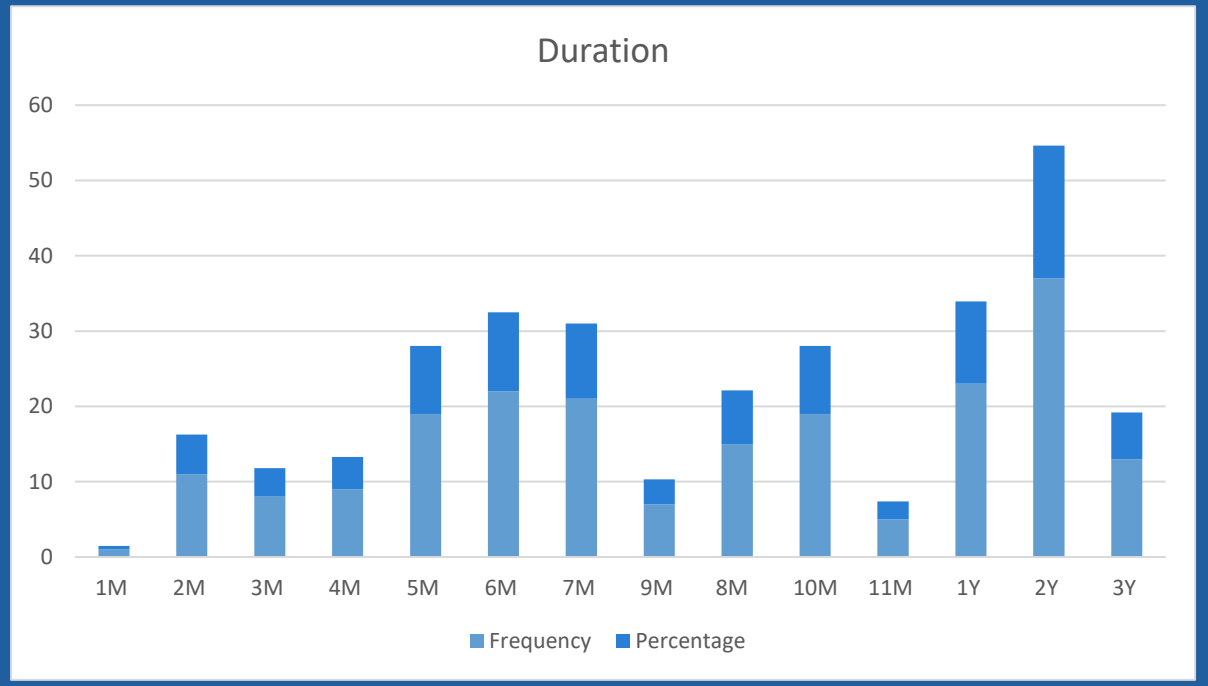
- Nuclear family respondents reported the highest perception of MHV services (mean = 33.76).
- Extended families had a slightly lower perception score (33.48), followed by joint families (33.35).
- Satisfaction was highest among joint family members (mean = 30.63).
- Nuclear families reported the lowest satisfaction (30.04), despite having the highest service perception.
- The data suggests a modest influence of family structure on both perception and satisfaction related to MHV services.

Figure_8 Number of Visits to Healthcare Services



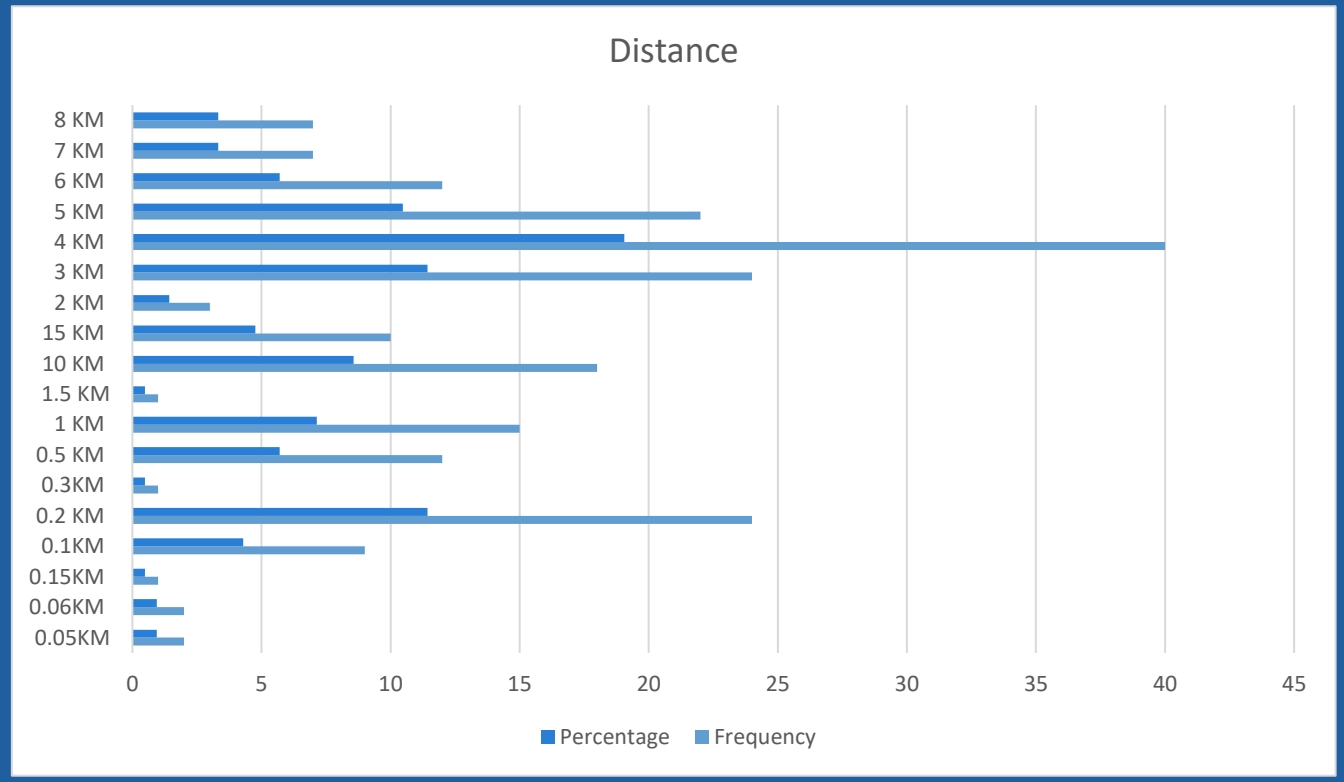
- Most respondents visited healthcare services 4 to 7 times, with the highest frequency at 5 visits, indicating moderate usage.
- A gradual decline in visits beyond 8 times shows that high-frequency users are limited.
- The trend suggests that service utilization is largely need-based, with moderate engagement by the majority and fewer chronic users.

Figure_9 Duration-wise Distribution of Frequency and Percentage



- 2-year duration (2Y) shows the highest frequency, suggesting most respondents have been associated with the services for a longer period.
- Durations beyond 1 year (1Y) show a sharp rise, indicating growing or sustained engagement over time.
- Shorter durations (1M, 11M) have minimal frequency, reflecting either new users or limited short-term engagement.

Figure_10 Distribution of Durations of health Conditions among MHU Patients



- 3 KM and 5 KM distances show the highest frequency and percentage, indicating these are the most common travel distances for users accessing healthcare services.
- Very short distances (0.05 KM, 0.15 KM) have minimal user activity, suggesting that most users are not located extremely close to service points.
- Moderate distances (0.5 KM to 1.5 KM) reflect average accessibility, showing a reasonable level of service reach in semi-nearby areas.

9. CHALLENGES IDENTIFIED

- Staff shortages and high turnover, especially of medical officers, led to irregular and inconsistent service delivery.
- Vehicle maintenance issues, fuel shortages, and challenging terrain caused frequent delays and reduced reach of MHUs.
- Lack of proper infrastructure forced MHUs to operate in makeshift settings, often lacking privacy and sanitation.
- Minimal coordination with local governance — PRI members were often uninformed or disengaged from MHU operations.
- Inactive or paper-only VHSCs resulted in weak local oversight and poor community linkage.
- Poor communication strategies and lack of Information, Education, and Communication (IEC) activities led to low public awareness.
- Limited community mobilization meant many potential beneficiaries were unaware of the MHU visits or their health benefits.
- Inadequate data collection and reporting systems hindered monitoring, evaluation, and evidence-based decision-making for improving MHU performance.

10 .CONCLUSION

- MHUs significantly improved access to basic healthcare services like antenatal care, immunizations, and treatment of common illnesses in underserved Gram Panchayats.
- Community satisfaction levels were high, with consistent positive feedback across age groups and genders regarding service quality and healthcare experiences.
- PRIs and VHSCs played a limited role, often due to lack of awareness or engagement, weakening the potential for localized planning and accountability.
- Operational challenges persisted, including irregular visit schedules, insufficient medical staff, vehicle maintenance issues, and absence of GPS tracking.
- There was a significant gap in awareness, with many villagers unaware of MHU visit timings or services, pointing to poor IEC (Information, Education, Communication) mechanisms.
- Gender differences were evident, with women perceiving MHU services more positively than men, though satisfaction levels were similar.
- Family structure influenced perceptions modestly, with nuclear families reporting slightly higher service ratings but lower satisfaction compared to joint families.
- Statistical analysis confirmed a strong correlation between satisfaction levels and service perception, emphasizing the importance of consistent, quality healthcare delivery in building community trust.

11. RECOMMENDATION

- Strengthen PRI engagement through regular capacity-building workshops and active participation in MHU planning and review meetings.
- Implement GPS tracking and SMS alert systems to improve schedule transparency and inform villagers in advance about MHU visits.
- Address staffing shortages by offering incentives and developing a dedicated healthcare cadre for rural mobile services.
- Ensure consistent logistical support with clear and adequate budget provisions for vehicle maintenance and daily operations.
- Promote community awareness through targeted health education campaigns led by ASHAs, ANMs, and local NGOs.
- Foster accountability and monitoring by integrating MHU data into district health dashboards and encouraging community feedback mechanisms.