

Small Clinics as an Innovative and Sustainable Strategy for Advancing Universal Health Coverage in Urban Areas

Ishtiyaque Ahmed¹; Purva Mittal^{2*}; Manisha Yadav³; Dr. Sunita Gulia⁴

¹Faculty of Management Studies, University of Delhi, India

²Assistant Professor, Department of Commerce, University of Delhi, India

³Unity Dental Clinic, Gurgaon

⁴Amity University Noida

Email: ¹ishtiyaque.phd@fms.edu; ²purva.m15@gmail.com;

³drmanishayadav2014@gmail.com; ⁴sunita.gulia24@gmail.com

ORCID: ¹<https://orcid.org/0000-0002-6010-0623>; ²<https://orcid.org/0000-0002-6364-794X>; ³<https://orcid.org/0009-0005-1158-6742>; ⁴<https://orcid.org/0009-0000-6446-0135>

ABSTRACT

The study explores perceptions of the administration of healthcare services at Mohalla Clinics, with a particular focus on ease of access, affordability, and the quality of health services. The research work has been carried out using primary data collected through a structured survey conducted at various clinics in Delhi. A total of 660 participants were selected using a two-stage sampling process. A stratified random sampling method was employed for selecting the districts, and 60 participants were drawn from each district. Two clinic sites in each of the districts were selected, and a total of 30 patients were randomly sampled in each clinic. The survey carried out a questionnaire about their perception of the health care system and service received, and their socio-demographic features. Descriptive statistics and exploratory factor analysis (EFA) were used to analyze the data to determine the factors influencing the evaluations of the services. The results show that these clinics are part of efforts to expand access to services, as they are sought out by women and low-moderate income women and men. The proximity, ease of access, and reduction of direct charges for patients attending the clinics for consultation and treatment, and for diagnostic tests, were viewed as strengths of the clinics. Quality of services has the greatest impact on perceptions; the other factors are accessibility and affordability. The findings indicate that Mohalla Clinics have significantly reduced geographical and financial barriers to accessing community-based primary healthcare. This achievement holds considerable potential for advancing universal health coverage in urban India.

Keywords: Mohalla Clinics; Primary Healthcare; Accessibility; Affordability; Quality of Healthcare Services; Patient Perception; Out-of-Pocket Expenditure; Universal Health Coverage.

Submission: 05/08/2026 Acceptance: 17/08/2026 Publication: 01/09/2026

1. Introduction

Primary healthcare (PHC) is recognized as an essential element of an effective, equitable, and sustainable healthcare system. The 1978 Alma-Ata Declaration played a significant role in promoting the concept of a community-based, cost-effective, and socially acceptable strategy for ensuring universal access to essential health care services. PHC serves as the first point of contact between people and the health care system, and is an important element in enhancing population health and reducing health care disparities and inequities (Macinko et al., 2007; Beasley et al., 2007). Strong primary healthcare systems are essential to ensuring that everyone has access to healthcare and are a crucial component in providing equitable health services to all communities, according to the World Health Organization. Primary health care services include preventive and curative health care services such as health education, immunization, maternal and child care, prevention of disease, and treatment of common diseases and injuries (Mansour & Al-Osimy, 1993).

This is an essential strategy to improve public health understanding, address social determinants of health, and increase community engagement in health care systems (McCalman et al., 2018; Sacks et al., 2020). Rapid population growth, socioeconomic inequalities, and formal and informal settlements are features of metropolitan areas, particularly in developing economies. These conditions pose a significant challenge to current healthcare systems in terms of their complex healthcare needs. Limited financial resources, poor infrastructure, and overcrowding of facilities make it difficult for urban residents in particular, migrants, daily wage earners, and people living in informal settlements to access good-quality health services (Sundararaman & Gupta, 2011; Rony et al., 2023).

Urban healthcare is facing great challenges due to India's fast-growing urban population. It is estimated that by 2031, there will be approximately 600 million people living in cities, which will create a greater demand for health care services (Kumar et al., 2018). The lack of suitable infrastructure for urban healthcare delivery has not matched the growth of urbanization, leaving the poor with a weak health service. This means that residents are forced to rely on private health care providers, resulting in high out-of-pocket costs. Other challenges that arise in the delivery of health care include inconsistent standards of care and quality of services (Grover et al., 2023). The Government of India has started various initiatives such as the National Urban Health Mission to improve access to healthcare for the urban poor through the development of infrastructure and community participation. These efforts do not address the fact that there are still large disparities in access to health care.

The Mohalla Clinics (MC) are a decentralized primary healthcare system that was introduced by the Government of Delhi in 2015. The main objective of these community clinics is to minimize the difficulties in accessing healthcare for marginalized communities by providing a place to get medical consultation, medications, and diagnostic services near where people live (Ismail et al., 2018; Wu et al., 2017; Lahariya, 2017). The model of the Mohalla Clinic has

become very popular as an innovative solution that improves access for vulnerable groups by placing clinics in the neighbourhood. Early assessments indicate that the use of private providers has decreased and that people have access to better health care. These clinics have been found to reduce health care costs for disadvantaged populations (Mukhopadhyay et al., 2023).

Mohalla Clinics can provide a better quality of primary care if they can reduce travel time and improve the doctor-patient relationship. They encourage the utilization of primary care services and boost the trust of the public in public healthcare systems (Patel & Pant, 2020). Furthermore, they help to reduce the strain put on secondary and tertiary care facilities by improving primary care as well as tackling common health problems. While Mohalla Clinic is becoming a popular model for primary health care in urban settings, there is still limited evidence on the effectiveness of these clinics. In the present studies, the emphasis is placed on specific clinics, areas of study, patient satisfaction, and accessibility of health services. These studies do give insights but are limited in understanding what influences the perception of healthcare services. Patient experiences in different districts of Delhi have not been studied often, limiting the generalizability of findings.

Moreover, there is a significant lack of studies examining the patient perspective of healthcare access, affordability, and quality of health services. It is essential to consider patient perspectives when evaluating healthcare programs and services in the community and determining what improvements are needed. Patient-focused evaluations can identify the areas for improvement and strengths within healthcare delivery systems, which can help inform the design of more responsive services. An understanding of patient experiences can help identify factors that affect utilization of and satisfaction with care in community-based care models.

The purpose of this study is to systematically investigate the perception of patients about the services they receive from Mohalla Clinics in Delhi. It aims to uncover the determinants of patients' assessments of the clinic services and to evaluate patients' perceived advantages and disadvantages. The study is on three key themes: accessibility, affordability, and quality of health services. The study aims to pinpoint the factors that are important to patients' perceptions of the health services provided by the Mohalla Clinics and to evaluate the perceived benefits and drawbacks from patients' perspectives, focusing on these key components of healthcare delivery. The study is designed to contribute to the information available that can improve urban community-based primary healthcare models.

Objectives of the Study

1. To identify the key parameters influencing patients' evaluation of healthcare services provided at Mohalla Clinics.
2. To assess patients' perceptions of the benefits and limitations of Mohalla Clinics in delivering accessible, affordable, and quality primary healthcare services.

2. Literature Review

2.1 Theoretical and Conceptual Framework

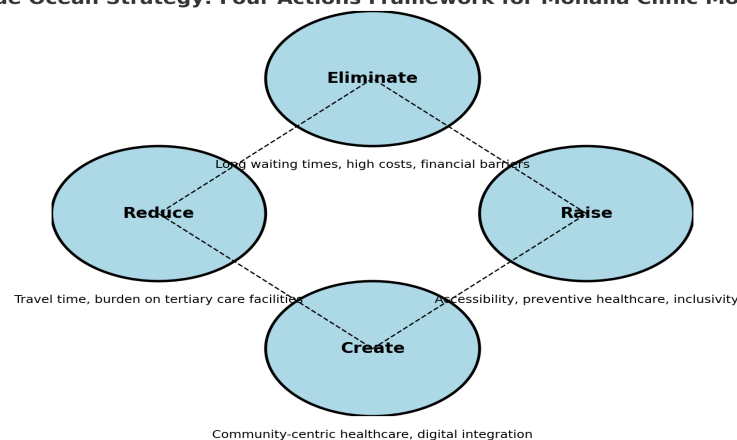
The Mohalla Clinic Model: A Blue Ocean Strategy for Value Innovation in Community-Based Primary Healthcare

Value innovation (Chan Kim & Mauborgne, 2005; Leavy, 2018) involves reducing expenses and expanding products to create a new blue ocean by exploring new, untapped markets and innovating what is not being offered. The strategy is designed to help build public-sector service models that are citizen-oriented, meet unmet needs, and create "blue oceans" that generate public value. In the Public Sector, rethinking services better to meet citizens' needs through the Blue Ocean approach is also about increasing value and reducing costs (Leavy, 2018). Public organizations can create innovative service models with a major focus on responsiveness by designing a new value curve different from the "red ocean" value curve (Vigoda-Gadot et al., 2008).

It aligns with the government reform approach of focusing on citizens, and the design of services is built around citizens' life events (Waara, 2025). Among the Blue Ocean innovations in public administration, collaborative networks have been created to allow authorities to leverage citizens' co-creation of transformation services (Feller et al., 2011). Citizens' empowerment and transparency are essential to participatory services, and a paradigm shift is a catalyst for this. Incorporating the Blue Ocean Strategy helps to develop uncontested, citizen-centered environments, improve public trust and value in government (Leavy, 2018; Vigoda-Gadot et al., 2008).

The Mohalla Clinic model is a reimagining of urban primary care delivery by the Government of the National Capital Territory of Delhi in 2015. Furthermore, Mohalla Clinics offer a decentralized, zero-cost model of healthcare delivery that is popularized throughout Indian communities, unlike the traditional Indian healthcare system, which is highly competitive, resource-intensive, requires payment by the patient, is under-resourced, and lacks equality of use. This helps in making services available, making service utilization more accessible, and reducing healthcare costs because of free consultation, medication, and diagnostics in the neighbourhoods (Lahariya, 2017).

Blue Ocean Strategy: Four Actions Framework for Mohalla Clinic Model



In this program, administrative obstacles and high treatment prices are eliminated, the burden of infrastructure/management is reduced, the reach of health services is expanded and patient confidence in them is boosted, and a decentralized primary health care without fees is created, following the Four Actions Framework of the Blue Ocean Strategy. It creates a decentralized, free primary health-care system, decreases infrastructure and administration, cuts unnecessary treatment expenses and administrative hurdles, and increases patients' confidence and accessibility. This innovation improves the efficiency of the system, decreases the patient saturation in secondary and tertiary hospitals, and enhances patient satisfaction. Finally, the model of Mohalla Clinic makes a case for the potential of strategic health policy innovation to provide an opportunity to reshape the way health services are provided to be more inclusive, more efficient, and more focused on the universal health coverage agenda.

Table 2.1: Strategy Canvas (Mohalla Clinics Model vs Traditional Healthcare System)

Key Factors	Public Hospitals	Private Clinics	Mohalla Clinics (Blue Ocean Model)
Cost to Patients	Free but limited	High consultation fees	Completely free (consultation, medicines, diagnostics)
Accessibility	Overcrowded, distant	Expensive, limited	Located within communities, no travel or less travel is required
Waiting Time	Long queues	Moderate	Minimal (walk-in, fast consultation)
Doctor-Patient Ratio	High patient load	Moderate	Optimized load due to decentralized clinics
Infrastructure Cost	High due to hospital maintenance	Moderate	Low-cost, small infrastructure
Preventive Care	Low	Low	Moderate (focus on early diagnosis, preventive services)

2.1 Accessibility, Geographic Proximity, and Healthcare Coverage

The major objective of community-based primary health care (CBPH) is to enhance the geographic distribution and physical access to primary care for the underserved urban citizenry. Aam Aadmi Mohalla Clinics in Delhi are a good example of decentralised healthcare that brings all the essential medical services closer to people, thus minimizing spatial barriers. Studies have shown the strategic location of Mohalla Clinics with residents can improve health care accessibility.

Agarwal et al. (2020) conducted a cross-sectional survey of 25 clinics in Delhi and found a significant correlation between clinic proximity and the utilization of health services and public awareness of the services offered in the clinics. The study highlighted the importance of providing better health care access to older citizens and women with limited mobility or decision-making capacity. Likewise, 16 Mohalla Clinics and observed that the majority of clinics covered a population within 2–3 km, and 114 patients per day were visiting the clinics, on average. Working people were able to attend the clinic before work, increasing the convenience and reducing waiting time (Akhtar & Ramkumar, 2023).

A study by Virmani et al. (2022) also found that geographic distance plays a crucial role in the utilization of health care services. They found that 75% of their sample of 37 clinics were within a 10-minute walk of a patient, showing that neighborhood-based approaches to healthcare delivery are effective. In Vohra and Thakur's study (2022) 85.3% of the respondents were able to reach Mohalla Clinics within 5 minutes, showing good accessibility. According to Rizvi (2024), almost 72% of patients were within 1 km of the clinic, which minimised travelling time and expenses. There is some evidence that Mohalla Clinics increased access to health care for populations that were less engaged in the public health care system. Lahariya (2017) found that 40-50% of those who used the Mohalla Clinic were first-time users of government health services, thus indicating outreach to groups who had previously not been able to use government services. But there are difficulties with infrastructure and increased coverage, according to research. While 1000 clinics were planned, the expansion has been slow as a result of administrative hassles and site-selection conflicts, said Bhuvan et al. (2019).

The results indicate that Mohalla Clinics can improve access to healthcare but scaling up is a policy challenge. The literature presents that proper utilization of the Mohalla Clinic services is affected by the people's proximity, their neighborhood location, and their easy access to the Mohalla Clinic services and better healthcare coverage of urban people.

2.2 Financial Protection, Affordability, and Reduction in Out-of-Pocket Expenditure

There is a need for financial protection from healthcare costs to access primary healthcare services. OOPe is a major barrier to accessing health care, particularly for low-income people in India. To address this, Mohalla Clinics provide complimentary consultation, treatment, and diagnostic services, thereby making services available to those who cannot afford them. Studies have shown that Mohalla Clinics have a positive impact on reducing healthcare costs. These clinics are found to save costs by eliminating consultant fees, transportation, and medicine costs (Sharma and Sharma, 2018). They found that the nearer the clinic, the lower the indirect costs, such as lost wages. It was observed that the diagnostic savings in Mohalla Clinics ranged from ₹100 to ₹2500 and consultation savings from ₹100 to ₹1000. These benefits are essential to those who may otherwise be contracting with the more expensive private services.

The community-based facilities proved to be economically advantageous, with 80% of patients reporting that they did not have to pay for transportation, as reported by Bhandari et al. (2017). Sah et al. (2019) reported that 80% of respondents had cut down on their spending after accessing Mohalla Clinics. It revealed that the majority of the users were in the lower-income category, 83% with an income of less than ₹2.5 lakh per annum, suggesting that the clinics cater to the economically backward population. According to Ahmed (2024), free services reduced costs to low-income families' pockets. The primary reasons for opting for Mohalla Clinics over private health care providers cited by Patel and Pant (2020) were free medications and diagnostics. Mukhopadhyay et al. (2023) suggested that the Mohalla Clinics offer a substitute to avoid unnecessary travel to hospitals to treat common illnesses, thereby saving the patient and the health system money. Although the results are favorable, certain studies address issues related to medicine availability and diagnostics. Sharma et al. (2023) found that over half of the respondents surveyed buy medicine privately at least sometimes because of the lack of medicines. The findings suggest that building and maintaining a secure supply chain is essential to the maintenance of Mohalla Clinics' financial protection benefits. The experiences of Mohalla Clinics highlight its successful role in addressing financial barriers to accessing services and protecting the poorest and most vulnerable from massive out-of-pocket payments for accessing care.

2.3 Quality of Healthcare Services, Patient Satisfaction, and Patient Experience

In addition to its accessibility and affordability, another important yardstick for the success of primary healthcare systems is the effectiveness of their services and the patient experience that is gained from using them. Mohalla Clinics have been subject to research, and there is a high level of satisfaction.

Sardesai and Mohanty (2019) surveyed more than 2000 people and reported a satisfaction rate of 91%, and 57% of people were very satisfied. Likewise, Vohra and Thakur (2022) found that 88.4% of the patients appreciated the professionalism of doctors, while 93.8% were satisfied with the quality of medicines. This study revealed that the interactions between the doctor and patient played an important role in influencing perceptions. Doctor-patient interaction emerged as the most important factor in patient satisfaction, as patients appreciated respectful interaction with doctors and understanding explanations of treatment, as reported by Sharma et al. (2023).

In terms of service efficiency, Hazarika et al. (2016) reported that Mohalla Clinics had a much shorter waiting time (15-20 mins) compared to the waiting time at private clinics (1-8 hrs). Technological solutions such as Swasthya Slate and token systems ensured better patient flow (Prashar, 2023). Despite their notable achievements, studies have reported persistent challenges in Mohalla Clinics, including issues related to service quality, inadequate infrastructure and space, poor sanitation, and the absenteeism of doctors

(Makkar & Sharma, 2019). Infrastructure constraints, such as a lack of seats/ sanitary facilities, were reported by Khanna and Srivastava (2021).

Goyanka and Garg (2023) reported a small number of reports on the provision of preventive health care services, indicating the need to increase health promotion activities. Studies have shown that Mohalla Clinics had a substantial impact on enhancing patient satisfaction and experiences. These clinics bolstered trust in the public healthcare system, encouraged more people to seek medical care, and its accessibility, affordability, and community engagement helped strengthen the healthcare system (Yamini & Bodkhe, 2022; Prashar, 2023).

According to the literature, Mohalla Clinics enhanced the accessibility and satisfaction of the healthcare services in the urban structure of Delhi. Research has highlighted that their neighbourhood-centric design facilitates ease of movement by cutting down travel time, especially for vulnerable groups (Agarwal et al., 2020; Virmani et al., 2022; Vohra & Thakur, 2022). Free consultation, medicine, and diagnostic services reduced the out-of-pocket cost for disadvantaged communities (Komal & Rai, 2017; Sharma & Sharma, 2018; Ahmed, 2024). Research has shown that the patients are very satisfied with the service, such as interaction with the physician, the waiting time, and the proximity of the service (Priyadarshan & Mala, 2024; Sardesai & Mohanty, 2019; Sharma et al., 2023). There is increasing literature on this initiative, but some of the gaps are yet to be filled. The majority of investigations are confined to certain clinics in various districts of Delhi and focus on issues of access, affordability, and quality of services.

3. Research Methodology

3.1 Study Design and Setting

The study adopted a quantitative, descriptive cross-sectional design to examine the patients' assessment and experience of services provided by Mohalla Clinics. It was conducted in the city of Delhi in India in the months of February-April 2023 to reach users of the Mohalla Clinics. The study assesses the key factors patients use to assess the primary healthcare services they receive from this decentralized primary health care initiative, with a focus on patients' perceptions, experiences, use, and satisfaction with services provided in terms of accessibility, affordability, and overall quality of the primary health care services they receive.

Sample Size and Sampling Technique

A two-stage sampling was employed to obtain a representation of the socio-demographic and geographic variables. Clinics were selected by stratified random sampling from 11 districts in Delhi; two Mohalla Clinics were selected in each district, making a total of 22 clinics. This provided representation in different population density, socio-economic, and health needs areas. Secondly, patient respondents were chosen from each clinic using simple random sampling. In each clinic, 30 patients were randomly selected, 660 in all (60 per

district). The number of samples was statistically sufficient for statistical analysis and Exploratory Factor Analysis (EFA) that ensure the validity and robustness of the results of the research.

3.3 Data Collection and Analysis

A structured questionnaire was used to collect primary data from the selected Mohalla Clinics, collecting socio-demographic information like age, sex, education, occupation, and the binary questions assessing the experiences of services and satisfaction. A Likert scale was used to assess patients' perspectives on access to health care, its availability, cost savings, and overall service quality. The questionnaire was pre-tested for clarity and relevance with consistency. Face-to-face interviews were used to gather data, so that the responses are more accurate and clarification can be given in real time. Informed consent, voluntary participation, and confidentiality of the procedures were adhered to very well. IBM SPSS software was used for coding and analysis of data.

Demographic characteristics and patient responses were summarized with descriptive statistics, including frequency, percentage, mean, and standard deviation. Exploratory Factor Analysis (EFA) was used to identify the dimensions that influence patients' evaluation of the Mohalla Clinics. The Kaiser–Meyer–Olkin (KMO) Measure of Sampling Adequacy was 0.703, which is acceptable, and Bartlett's Test of Sphericity was significant ($p < 0.05$), which means that the test variables have appropriate correlations. The factor analysis was thought to be the most suitable approach based on these tests. Three main dimensions were identified that affect patients' assessment by the EFA: Accessibility, Affordability, and Quality of Services. These methods gave a deep understanding of the experiences and evaluations of the patients of Mohalla Clinic services.

4. Data Analysis and Interpretation

4.1 Demographic Profile of Respondents

Table 4.1: Demographic Profile of Respondents

Variable	Response	No. of Participants	Percentage
Gender	Male	201	30.5%
	Female	459	69.5%
	Total	660	100.0%
Age	Below 18 Years	53	8.0%
	18–30 Years	184	27.9%
	31–40 Years	161	24.4%
	41–50 Years	107	16.2%
	51–60 Years	67	10.2%
	60+ Years	88	13.3%

	Total	660	100.0%
Marital Status	Unmarried	98	14.8%
	Married	562	85.2%
	Total	660	100.0%
Education	Illiterate	177	26.8%
	Primary Education	80	12.1%
	Up to 8th	108	16.4%
	10th	99	15.0%
	12th	97	14.7%
	Graduation	81	12.3%
	Post-Graduation	17	2.6%
	MPhil	1	0.2%
	Total	660	100.0%
Religion	Hindu	399	60.5%
	Muslim	241	36.5%
	Sikh	16	2.4%
	Christian	4	0.6%
	Total	660	100.0%
Caste	General	303	45.9%
	OBC	220	33.3%
	SC	128	19.4%
	ST	9	1.4%
	Total	660	100.0%
Working Status	No	436	66.1%
	Yes	224	33.9%
	Total	660	100.0%
Nature of Job	Daily Wage Worker	58	8.8%
	Salaried (Formal)	26	3.9%
	Salaried (Informal)	63	9.5%
	Self Employed	86	13.0%
	Housewife	321	48.6%
	Unemployed/Senior Citizen	28	4.2%
	Student	78	11.8%
	Total	660	100.0%
Monthly Household Income	Up to 2500	10	1.5%

	2500-5000	32	4.8%
	5000-10000	162	24.5%
	10000-25000	363	55.0%
	25000-50000	67	10.2%
	More than 50000	26	3.9%
	Total	660	100.0%

The demographic analysis of the respondents who used Mohalla Clinics shows that the majority of the people using the clinics were female (69.5%), which indicates that women are more engaged in the use of the clinics compared to men (30.5%). As for age distribution, the major groups are 18-30 years (27.9%) and 31-40 years (24.4%), suggesting that younger and middle-aged people are using these services. Many respondents were married (85.2%), suggesting that most users of the clinic are in family households. The educational profile revealed that there were significant number of learners with low and moderate levels of education, that is 26.8% of the respondents were illiterate, and many of them had attained primary or secondary level of education only, while a small percentage had attained higher education. When it comes to religion, the majority of respondents were Hindu (60.5%) and Muslim (36.5%). The caste distribution shows that the "General" category had the highest representation (45.9%), followed by the OBC (33.3%) and SC (19.4%) categories, which suggests that the participants came from a wide variety of social backgrounds.

As regards employment status, 66.1% were not formally employed, the largest group being housewives (48.6%) followed by self-employed and students. The distribution of incomes shows that most respondents are in the low and middle income group, having a monthly income of between ₹10,000-25,000. Overall, the findings point to a Mohalla Clinic that is primarily used by women, low-income and middle-income households, and socially diverse communities, highlighting that these serve as a means to improve access to health care for economically disadvantaged groups.

4.2 Exploratory Factor Analysis (EFA)

Exploratory Factor Analysis (EFA) is a multivariate statistical technique that helps to find the latent constructs based on correlation among the observed variables (Hair et al., 2014). In the healthcare sector, EFA has been applied to studies of service quality, patient satisfaction, and access to healthcare. SERVQUAL model developed by Parasuraman et al. (1988) divides service quality into five aspects, and Batbaatar et al (2017) pointed out that affordability and accessibility are key factors to patient satisfaction. Research demonstrates that the doctor-patient interaction, the attitude of staff members, and the environment of the facility have a significant effect on patient satisfaction (Lim & Tang, 2000). Kumar and Kumar (2023) used EFA to assess patient satisfaction with Mohalla Clinics in Delhi, and the two most prominent factors that emerged were Service Quality and Facility Infrastructure &

Cleanliness. Data analysis was performed on IBM SPSS Statistics 21 software by principal component extraction and varimax rotation. Patient evaluations were conducted across three parameters using a 12-item Likert-scale questionnaire.

Table 4.2: Questionnaire Items

Code	Research Questionnaire Items/Variables (Patients)
A1	How far do you have to travel to reach this facility from your home?
A2	Is the Front Desk friendly and respectful?
A3	Does the doctor spend adequate time on your checkup?
A4	Does the doctor explain your treatment and answer your questions?
A5	Do doctors respect your confidentiality?
A6	When I have to wait in this clinic, I sometimes learn very useful things from posters and other information materials.
A7	How effective are the medicines in curing your problems?
A8	How much do you spend to come here?
A9	What are your savings on transportation after the opening of this Mohalla Clinic?
A10	What are your savings on doctor consultation fees and medicines after the opening of this Mohalla Clinic?
A11	What are your savings on pathology/laboratory tests after the opening of the Mohalla Clinic?
A12	How satisfied are you with the cleanliness and appearance of the facility?

Table 4.3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.703
Bartlett's Test of Sphericity	Approx. Chi-Square	758.716
	df	66
	Sig.	.000

Table 4.4: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.437	20.312	20.312	2.437	20.312	20.312	2.401	20.009	20.009

2	1.406	11.720	32.032	1.406	11.720	32.032	1.405	11.711	31.720
3	1.364	11.366	43.398	1.364	11.366	43.398	1.401	11.678	43.398
4	.977	8.139	51.537						
5	.936	7.801	59.338						
6	.892	7.436	66.774						
7	.799	6.657	73.431						
8	.744	6.200	79.631						
9	.656	5.471	85.102						
10	.634	5.280	90.381						
11	.600	5.004	95.385						
12	.554	4.615	100.000						

Extraction Method: Principal Component Analysis.

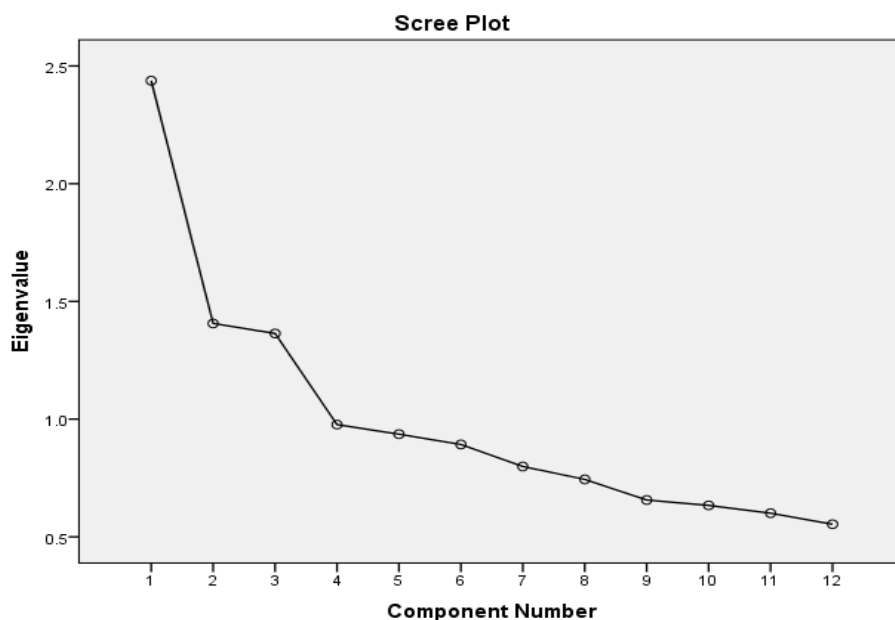


Table 4.5: Rotated Component Matrix

Code	Item	Factor 1: Quality of Services	Factor 2: Accessibility	Factor 3: Affordability
A2	Front Desk Friendliness	0.647	-0.067	0.034
A3	Adequate Time Spent	0.623	-0.025	0.052
A4	Communication and Explanation	0.647	-0.022	0.090
A5	Respect for Confidentiality	0.681	-0.025	-0.076

A6	Educational Value of Clinic Materials	0.465	0.267	-0.136
A7	Effectiveness of Medications	0.422	-0.246	0.320
A12	Cleanliness and Appearance	0.539	-0.041	-0.018
A1	Distance to Clinic	-0.075	0.775	0.000
A8	Transportation Costs to Reach the Clinic	-0.013	0.811	0.068
A9	Savings on Transportation	-0.066	-0.043	0.712
A10	Savings on Consultation and Medication	-0.050	0.023	0.627
A11	Savings on Laboratory Tests	0.114	0.066	0.596

a. Rotation converged in 4 iterations.

Interpretation

To evaluate the patient experiences in Mohalla Clinics, Exploratory Factor Analysis was done by applying 12 Likert scale items. Kaiser-Meyer-Olkin measure showed a value of 0.703, which suggested acceptable sampling adequacy, and Bartlett's Test of Sphericity was significant ($p < 0.05$), indicating that the data were suitable for analysis. Using a principal component extraction and varimax rotation procedure in IBM SPSS Statistics 21, three factors were extracted that had eigenvalues >1 and explained 43.398% of the variance. The first factor (eigenvalue = 2.437) accounted for 20.312% of the variance and was indicative of the Quality of Services.

The second (eigenvalue = 1.406) was identified as Accessibility, accounting for 11.720% of the variance, and the third (eigenvalue = 1.364) was identified as Affordability, accounting for 11.366% of the variance. Through this rotation, these dimensions were successfully identified, and a plan was laid down for evaluating the Mohalla Clinic model in health care delivery.

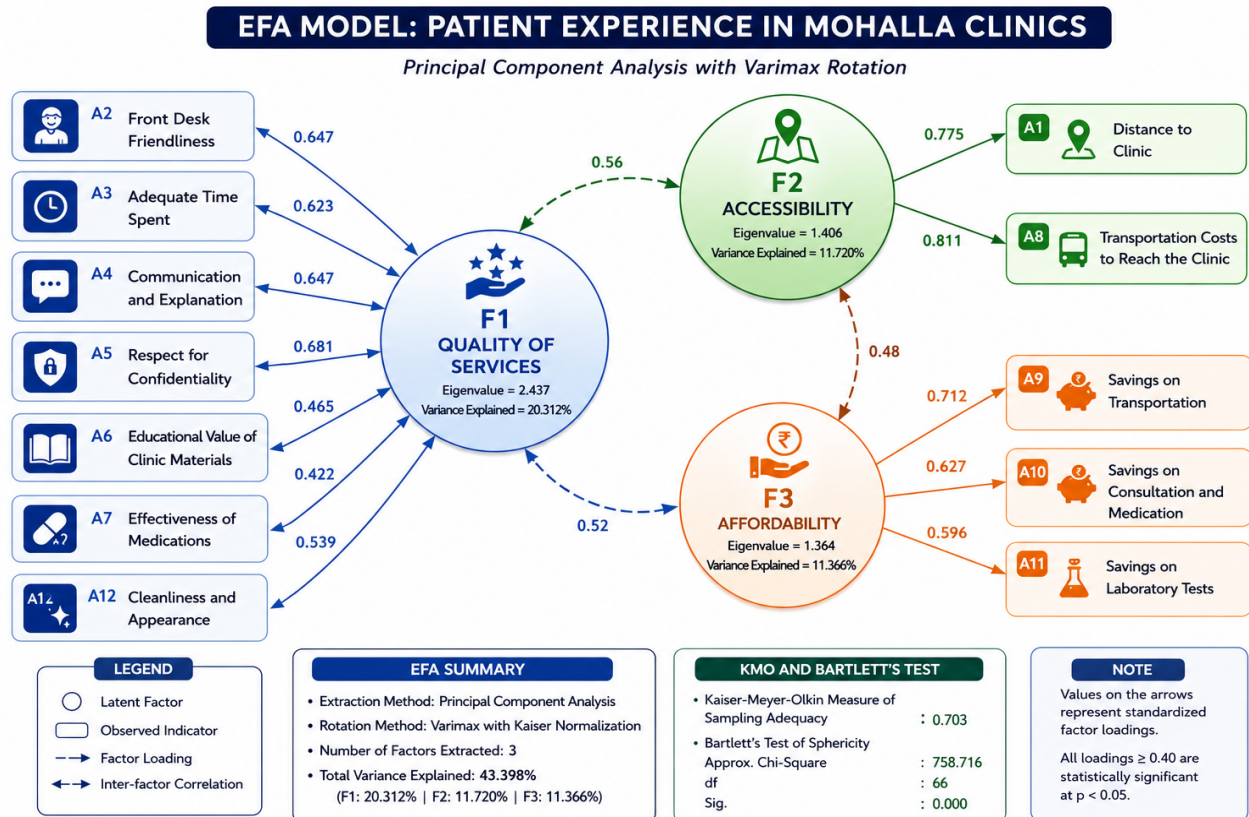
Accessibility constituted an important factor in the exploratory factor analysis (EFA) with high loading on the distance to the clinic (A1: 0.775) and on the costs of transporting to the clinic (A8: 0.811). In both cases, the use of loadings suggests that the strong relationship between financial affordability and physical proximity to services in accessing health services is central. The combination of the strategic positioning and the Mohalla Clinics' population target in areas of need directly tackles these challenges. The clinics can help address major logistical and economic challenges to health services by reducing the distance to be traveled (A1) and travel costs (A8). This has provided easier access to primary health

services and health care use, such as by vulnerable and lower-income groups. In the process of that Mohalla Clinics have reduced the burden of secondary and tertiary establishments, and have helped make healthcare more easily available and accessible to people in urban Delhi, thus optimizing the delivery of healthcare.

Affordability also emerged as an important factor in the analysis; it was highly factor-loaded on A9 (Savings on Transportation), A10 (Savings on Consultation and Medication), and A11 (Savings on Laboratory Tests). The following variables underscore how successful the Mohalla Clinic model is for the economically disadvantaged in an urban environment in lowering the out-of-pocket expenditure (OOPE). Through the supply of free or subsidised primary care services (consultations, medicines, diagnostic tests, etc) the model will make healthcare financially accessible and reduce travel costs (A9). The number of visits that are reduced, as indicated in the A10 and A11, would seem to indicate that the model helps reduce costs. These results highlight how important it is to ensure affordability to increase financial protection and promote UHC in urban areas.

The third factor is **Quality of Services** and includes aspects related to patients' satisfaction and Mohalla Clinics' expectations of the quality of service. It has a loading of 0.681 with A5 (Respect for Confidentiality), a loading of 0.647 with A2 (Front Desk Friendliness), a loading of 0.647 with A4 (Communication and Explanation), and a loading of 0.623 with A3 (Adequate Time Spent by the Doctor). These are key messages about trust and 'Patient Centred Care' in respectful and empathetic communication.

A12 (Cleanliness and Appearance) (loading: 0.539) emphasizes the need for a clean environment to enhance patient experience. A6 (Educational Value of Clinic Materials) and A7 (Effectiveness of Medications) with lower loadings of 0.465 and 0.422, respectively, suggest that areas of improvement in informational support and therapeutic outcomes, respectively, are possible for enhancing patient trust. These variables indicate that quality of care encompasses clinical competence as well as interpersonal and environmental dimensions that affect patients' perceptions of care.



Accessibility (A1, A8), affordability (A9, A10, A11), and quality of services (A2 to A7, A12) are three factors that form a comprehensive, interconnected framework for assessing patient experiences at Mohalla Clinics. While each is a distinct element, they are all interconnected as accessibility ensures that clinics are accessible; affordability ensures that they are financially accessible; and quality ensures trust through respectful and competent service. The integration highlights the success of the Mohalla clinic model in delivering equitable, inclusive, and patient-centred primary health care. It provides lessons for improving health systems and policy implementation in other underserved cities and towns.

4.3 Descriptive Statistical Analysis of Key Dimensions Influencing Patient Perceptions at Clinics

Table 4.5: Statistical Analysis

Variables	Scale	N	Minimum	Maximum	Mean	Std. Deviation
Accessibility						
<i>Distance to Clinic</i>	4-point	660	1	3	1.12	0.367
<i>Transportation Cost to Reach Clinic</i>	5-point	660	1	5	1.27	0.693
Affordability						

<i>Savings on Transportation</i>	5-point	660	1	5	2.26	1.276
<i>Savings on Consultation and Medication</i>	7-point	660	1	7	3.83	1.109
<i>Savings on Laboratory Tests</i>	6-point	660	1	6	2.82	1.809
Quality of Services						
<i>Front Desk Friendliness</i>	5-point	660	2	5	4.46	0.564
<i>Adequate Time Spent</i>	5-point	660	3	5	4.42	0.543
<i>Communication and Explanation</i>	5-point	660	3	5	4.31	0.597
<i>Respect for Confidentiality</i>	5-point	660	3	5	4.25	0.661
<i>Educational Value of Clinic Materials</i>	5-point	660	1	5	3.46	1.152
<i>Effectiveness of Medications</i>	5-point	660	3	5	4.39	0.660
<i>Cleanliness and Appearance</i>	5-point	660	1	5	4.32	0.638
Valid N (listwise)		660				

The statistical analysis of patient feedback (N=660) provides a comprehensive assessment of three key factors shaping public perception of Mohalla Clinics: Accessibility, Affordability, and Quality of Services. The results demonstrate the model's success in addressing geographical and financial barriers and ensuring service quality. Further, the analysis shows target areas for potential improvement, notably in the costs of diagnostics and patient education.

Accessibility was measured using measures of physical distance and transportation costs. The distance that people lived from the clinic was on average 1.12 (on a 1–4 scale), and the standard deviation was relatively small at 0.367, so that there was not a great deal of variation, with most people living close to the clinic. Likewise, the mean for transportation was low (1.27, on a 1–5 scale) with a slightly higher standard deviation (0.693), indicating that most patients had little cost associated with their transport to the clinic, but there was some variability in costs. The findings corroborate the spatial efficiency of the Mohalla Clinic model, which places health care facilities in the neighborhood.

The **affordability** was assessed by indicators reflecting cost savings in transportation, consultation, medications, and diagnostic services. The scores for transportation savings were modest, averaging 2.26 on a 1–5 scale with an SD of 1.276. The savings on consultations and medications, on the other hand, were more significant, with a mean of 3.83 and a

standard deviation of 1.109 on a scale from 1 to 7, indicating the financial benefits of the clinics. The average savings were 2.82 on a 1–6 scale, with the maximum standard deviation at 1.809.

The assessment of **quality of services** was based on patient experience indicators, which included the behavior of staff, doctor interaction, cleanliness, confidentiality, treatment efficacy, and patient education. The friendliness of the front desk staff was rated highly, on a 1-5 scale, it scored 4.46 with an SD of 0.564, indicating good patient-provider interaction. The doctor interaction was significant, and the doctors spent, on average, 4.42 minutes (SD = 0.543) and received a communication clarity score of 4.31 (SD = 0.597). The trust levels in the services were high, with confidentiality rated at 4.25 (SD = 0.661). The efficacy of the treatment (mean = 4.39, SD = 0.66) and cleanliness (mean = 4.32, SD = 0.64) also received positive feedback. The educational value of clinical materials was rated lower, with a mean of 3.46 (SD = 1.152), with greater variability, indicating a need for more information to support the educational value of clinical materials.

The model is very effective in providing the patients with adequate hygiene and dignity; however, the lack of success of its education skills suggests the need to develop communication materials and awareness campaigns to assist patients' health literacy. To conclude, the statistical analysis has indicated the overall effectiveness of Mohalla Clinic, which is quality, cost, and easily accessible healthcare services. The average scores for each of the key areas are high with little variability, demonstrating the consistency of service provision and high satisfaction levels with the services. However, the emerging issues concerning accessibility of diagnostic services, low health education performance indicate that there is a need of policy intervention and allocation of resources. When implemented to address these challenges, it may help expand the health care provisioning of the marginalized population to be more equitable, comprehensive and preventive.

5. Discussion

This study aimed to examine socio-demographic, usage, and key facet regarding the provision of healthcare at Mohalla Clinics in Delhi, which included access, affordability, and the quality of healthcare services. These results indicate that these clinics are mostly being used amongst females and low or middle-income and socially diverse. Women are numerous with visits, emphasising the clinics' importance in providing more access to care to individuals who do not have mobility, monetary resources or social support issues. This finding is congruent with earlier research (Agarwal et al., 2020; Sah et al., 2019) that highlights the positive effects on women and marginalized population groups. The percentages of disadvantaged groups and low- to middle-income users validate the findings of Sharma and Sharma(2018) and Ahmed (2024) that free public health services are essential to closing the access gaps of disadvantaged people and those with lower income. When looking at the overall trend of usage, this is a more active type of usage, likely due to a

greater awareness and proactive approach to seeking health services among younger and middle-aged people. The clinics cater to individuals with low-level occupations, children, and housewives to demonstrate this fact. These results indicate that the Mohalla Clinics have been able to reach areas in society that do not have access to health services, which corresponds to the point raised by Lahariya (2017), that many people who use the services of the clinic are new to the public health care system.

This study reveals that accessibility is an important determinant of health care use. Participants' results show that the decentralized, community approach is successful as people live close to Mohalla Clinics and have low transportation expenses. In agreement with the previous studies by Virmani et al. (2022), Vohra & Thakur (2022), and Rizvi (2024), the findings in this study, such as the influence of geographic proximity on the utilization of healthcare services, prove this. With easy travel time and cost, Mohalla Clinics have removed limitations imposed by logistics with a view of enhancing a more comprehensive and proactive approach for people seeking healthcare. This model aims to shift the burden of secondary and tertiary health services to a more community-based approach to addressing common community health issues.

The results, however, show that there are some district-specific patterns of geographic inequity in terms of the indicators of service availability. Transportation costs were also cited as a cost issue in the study. To minimise out-of-pocket expenses for patients by supplying free talks and advice, medicine, and even subsidised diagnostic solutions, particularly for people in economically deprived communities. As has been observed from the results, there is a significant decrease in Consultation, and prescribing medications compared to previous research done (Komal & Rai, 2017; Sharma & Sharma, 2018; Patel & Pant, 2020). A more varied amount of savings was reported from the diagnostic services, suggesting possible inconsistencies in availability and/or utilization of the service.

This finding aligns with research such as Sharma et al. (2023), indicating potential diagnoses and medicine shortages at times. The Mohalla Clinics offer robust financial security in primary health care, with the need for further development of ancillary services to ensure that all services are affordable. The results validate the contribution Mohalla Clinics can offer to improve financial risk protection and support Universal Health Coverage objectives.

Patients' perception on the quality of service plays a significant role in the success of the Mohalla Clinic model. Studies have shown that patient satisfaction is high with staff behavior, doctor-patient interactions, length of consultation, and privacy, all of which are critical to establishing patient-centered care and trust. This finding is consistent with the results of previous studies (Sardesai & Mohanty, 2019; Sharma et al., 2023), which highlight the role of interpersonal factors in satisfaction. Comments on the cleanliness and the environment in the clinics are positive, which indicates that the infrastructure is acceptable. The lower ratings of the informational materials, however, suggest a lack of health awareness and patient education and suggest increased efforts in the area of prevention and education. The

unique combination of accessibility, affordability, and service quality has resulted in a high level of satisfaction among patients with Mohalla Clinics. Overall, the scores across the various indicators indicate positive feedback, which is in line with previous studies (Vohra & Thakur, 2022; Sardesai & Mohanty, 2019). Together with the low prices for services, the easy access to services, and respectful treatment have contributed to more trust in public health care services.

The study shows that access to diagnostic services and designing health education plans and systems to improve them, along with consistency in access to services by region, are key points for improvement. The findings demonstrate that all three—the accessibility of, affordability of, and quality of health treatments—are interlinked in their impact on the use of health care. The study has adopted a comprehensive approach towards the study of Delhi to understand the model at the district level. Mohalla Clinics have proven to be an effective model of community-based primary health care, especially for the vulnerable group. To achieve sustainability, and sustainability as the model becomes equity and Universal Health Coverage, targeted service delivery improvements, infrastructure, and communication are key.

6. Policy Implications

The outcome of the study will play a vital role in the policy-making process for the purpose of making the Mohalla Clinic model sustainable and efficient. Despite these clinics putting healthcare at the doorsteps of the people, it is a pressing need to disseminate healthcare more equitably in all the various districts of Delhi and much more so in underserved, heavily populated districts. One way in which access can be enhanced further will be by way of appropriate expansion of the clinic network, which may serve to abate geographical disparities. The clinics' successful results with affordability show the need to sustain free consultations and drugs. The gaps in diagnostics need to be addressed by decision-makers to strengthen diagnostics and supply chains as well as offer financial protection. Also, the low impact of informational materials suggests a redesign of the direction of health communication, since among people with lower amounts of formal schooling, their knowledge of health must be raised using pictorial, easily understood, and multilingual formats. High levels of patient-centred care, including respect, good consultation time and confidentiality, should be maintained through ongoing training and monitoring. In addition, incorporating preventive and promotive health services, such as health awareness campaigns and screening, can enhance health outcomes. Taken together, these policy measures can improve service provision, strengthen trust of the health services, and contribute to the overall aim of equitable and sustainable UHC.

7. Conclusion

The study concludes that Mohalla Clinics are proving to be a successful and innovative strategy to provide primary health care in urban settings. These clinics have not just improved access to health care; they have significantly lowered out-of-pocket costs and provided high-quality, patient-centered care, thus overcoming important concerns of accessing health care for economically and socially disadvantaged populations. The results show that women, low- and middle-income families, and low-status groups of the workforce are most likely to be served by these services, highlighting the importance of targeting the poor in these services. Easy access, affordability, and quality of service have led to good satisfaction among patients and greater trust in public health services. The study's findings also reveal opportunities for enhancing services, including making the same services available in every district, making more diagnostic services available, and increasing health education programs. The Mohalla Clinic model is generally a viable approach to ensure equitable health care delivery and is a valuable component of the Universal Health Coverage (UHC) agenda. The model has good replication potential in other urban regions of India with specific interventions and policy support.

8. Limitations of the Study

This study offers some insights into the functioning of Mohalla Clinics but has limitations, and its findings should be interpreted with caution. The study design is cross-sectional: a snapshot of patient experience at one time, with no ability to measure changes in healthcare use and healthcare service quality over time. Though it's a district-wise approach, only two clinics were taken in two districts, which might not be the reflection of the diversity of Mohalla Clinics in Delhi. The conclusions are derived from self-reported data and may have a recall bias, social desirability bias, or interpretation bias. Demand-side factors – such as accessibility, affordability and the quality of service – are discussed, but not in as much detail as supply-side factors are discussed, as they play an important role in the understanding of service delivery outcomes, but are not explored in detail. There is only an analysis about the health education as it relates to the experience of the patient with information materials, not about his objective health literacy or behavior changes as a result of the health education. The findings are not necessarily applicable to different regions and other cities in the world due to differences in infrastructure as well as the socio-economic set-up of healthcare in different regions and cities outside of Delhi. For future research, more in-depth information could be gained using comparative state analysis, a mixed-methods approach, and more of a longitudinal design could be used around these limitations.

Informed Consent

Prior to participation, all respondents were informed about the purpose of the study, the voluntary nature of participation, confidentiality of responses, and their right to withdraw

at any time without penalty. For physically administered questionnaires, written informed consent was obtained before participation. No personally identifiable information was collected.

Funding Statement

This research did not receive any specific grant from funding agencies in the public, commercial or not-for-profit sectors.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Originality Statement

This manuscript is an original work and has not been published previously, nor is it under consideration for publication elsewhere. All sources have been appropriately cited, and any overlapping content has been disclosed.

Research Integrity Statement

The authors confirm that the research has been conducted with integrity and in accordance with accepted academic standards. No data fabrication, falsification, or inappropriate data manipulation has occurred. The methods and procedures are reported transparently to ensure reproducibility.

Copyright Agreement

The authors agree to the publication terms and conditions of the journal and confirm that the manuscript complies with all ethical and legal requirements.

References

1. Agarwal, T., Bhattacharya, S., & Lahariya, C. (2020). Pattern of use and determinants of return visits at Mohalla Clinics of Delhi. *Indian Journal of Community Medicine*, 45(1), 77–82. <https://pubmed.ncbi.nlm.nih.gov/32029989/>
2. Ahmed, I. (2024). Transforming primary health care in Delhi: A policy review of the Mohalla Clinic model. *International Journal of Health Sciences and Research*, 14(10), 149–162. <https://doi.org/10.52403/ijhsr.20241015>
3. Akhtar, M. H., & Ramkumar, J. (2023). Making primary healthcare delivery robust for low-resource settings: Learning from Mohalla Clinics. *Discover Social Science and Health*, 3(1). <https://doi.org/10.1007/s44155-022-00030-0>

4. Batbaatar, E., Dorjdagva, J., Luvsannyam, A., Savino, M. M., & Amenta, P. (2017). Determinants of patient satisfaction: A systematic review. *Perspectives in Public Health*, 137(2), 89–101. <https://doi.org/10.1177/1757913916634136>
5. Beasley, J. W., Starfield, B., van Weel, C., Rosser, W. W., & Haq, C. L. (2007). Global health and primary care research. *The Journal of the American Board of Family Medicine*, 20(6), 518-526. <https://doi.org/10.3122/jabfm.2007.06.070172>
6. Bhandari, A., Bhardwaj, I., & Sawhney, S. (2017). *Quality and accessibility of government hospitals and Mohalla Clinics*. Delhi Citizens. 94
7. Bhuvan, K. C., Shankar, P. R., & Shrestha, S. (2019). Can the Delhi Government's Mohalla Clinic overcome its challenges and provide quality health services to the urban poor population?
8. Chan Kim, W., & Mauborgne, R. (2005). Value innovation: A leap into the blue ocean. *Journal of Business Strategy*, 26(4), 22–28. <https://doi.org/10.1108/02756660510608521>
9. Feller, J., Finnegan, P., & Nilsson, O. (2011). Open innovation and public administration: transformational typologies and business model impacts. *European Journal of Information Systems*, 20(3), 358-374. <https://doi.org/10.1057/ejis.2010.65>
10. Goyanka, R., & Garg, C. C. (2023). Patient perception of attributes of primary care: a study of Aam Aadmi Mohalla Clinics in Delhi, India. *Family Practice*, 40(5-6), 707-713.
11. Grover, A., Bhargava, B., Srivastava, S., Sharma, L. K., Cherian, J. J., Tandon, N., ... & Chatterjee, A. (2023). Developing Standard Treatment Workflows—way to universal healthcare in India. *Frontiers in public health*, 11, 1178160. <https://doi.org/10.3389/fpubh.2023.1178160>
12. Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2014). Multivariate data analysis (Pearson new internat. ed). *Harlow: Pearson*.
13. Hazarika N, Srinivasan N, Sharma N. Mohalla Clinics: Will they address the health needs of the Aam Aadmi in Delhi? In: Delhi Citizen Handbook 2016: Perspective on Local Governance in Delhi. New Delhi: Centre for Civil society; 2016. p. 131-47.
14. Ismail, A., Karusala, N., & Kumar, N. (2018). Bridging disconnected knowledges for community health. *Proceedings of the ACM on Human-Computer Interaction*, 2(CSCW), 1–27. <https://doi.org/10.1145/3274344>
15. Kapoor, M., Nidhi Kaur, K., Saeed, S., Shannawaz, M., & Chandra, A. (2023). Impact of COVID-19 on healthcare system in India: A systematic review. *Journal of public health research*, 12(3), <https://doi.org/10.1177/22799036231186349>
16. Khanna, A., & Srivastava, A. (2021). Role of Mohalla [Community] Clinics in providing primary healthcare: A study in Delhi. *J Sci Res Varanasi*, 2021. 29-33

17. Kumar, K., & Kumar, R. (2023). Antecedents and inhibitors for use of primary healthcare: A case study of Mohalla Clinics in Delhi. In *Computational Statistical Methodologies and Modeling for AI* (pp. 337–352). CRC Press.
18. Kumar, S., Kumar, S., & Gupta, B. (2018). Urban health: Needs urgent attention. *Indian Journal of Public Health*, 62(3), 214. https://doi.org/10.4103/ijph.ijph_90_18
19. Lahariya, C. (2016). Abolishing user fee and private wards in public hospitals. *Economic and Political Weekly*.
20. Lahariya, C. (2017). Mohalla Clinics of Delhi, India: Could these become platform to strengthen primary healthcare?
21. Lahariya, C. (2019). Basthi Dawakhana of Hyderabad: The first urban local body-led community clinics in India. *Journal of Family Medicine and Primary Care*, 8(4), 1301–1307.
22. Lahariya, C. (2020). Access, utilization, perceived quality, and satisfaction with health services at Mohalla (Community) Clinics of Delhi, India. *Journal of Family Medicine and Primary Care*, 9(12), 5872.
23. Lahariya, C. (2020). Health & wellness centers to strengthen primary health care in India: Concept, progress and ways forward. *The Indian Journal of Pediatrics*, 87(11), 916-929
24. Leavy, B. (2018). Value innovation and how to successfully incubate “blue ocean” initiatives. *Strategy & Leadership*, 46(3), 10-20. <https://doi.org/10.1108/sl-02-2018-0020>
25. Lim, P. C., & Tang, N. K. (2000). Patients’ expectations and satisfaction. *International Journal of Health Care Quality Assurance*, 13(7), 290–299.
26. Macinko, J., Montenegro, H., Nebot Adell, C., & Etienne, C. (2007). Renewing primary health care in the Americas. *Revista Panamericana de Salud Publica= Pan American Journal of Public Health*, 21(2-3), 73-84.
27. Makkar, S., & Sharma, M. (2019). A study into the role of Mohalla Clinics in revolutionizing primary healthcare in Delhi.
28. Mansour, A. A., & Al-Osimy, M. H. (1993). A study of satisfaction among primary health care patients in Saudi Arabia. *Journal of community health*, 18(3), 163-173.
29. Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12–40
30. McCalman, J., Bailie, R., Bainbridge, R., McPhail-Bell, K., Percival, N., Askew, D., ... & Tsey, K. (2018). Continuous quality improvement and comprehensive primary health care: a systems framework to improve service quality and health outcomes. *Frontiers in Public Health*, 6, 76. <https://doi.org/10.3389/fpubh.2018.00076>
31. Mukhopadhyay, T., Guite, N., & Acharya, S. S. (2023). Healthcare services for the elderly population in NCT of Delhi: Understanding the role of Mohalla Clinics. In

- Handbook of Aging, Health and Public Policy: Perspectives from Asia (pp. 1–20). Springer Nature.
32. Patel, S., & Pant, P. (2020). Decentralisation and urban primary health services: A case study of Delhi's Mohalla Clinics. *Commonwealth Journal of Local Governance*, 23, Article 6987. <https://doi.org/10.5130/cjlg.vi23.6987>
33. Prashar, A. (2023). Mohalla Clinic: A case on healthcare service operations and quality. *Vision: The Journal of Business Perspective*, 27(4), 538–552. <https://doi.org/10.1177/09722629211041837>
34. Priyadarshan, D., & Mala, K. (2024). A review: An initiative strengthening primary health care system—Delhi's Mohalla Clinic. *International Journal of Creative Research Thoughts*, 12(7), a521–a527.
35. Rizvi, T. (2024, July). *A study of Mohalla clinic scheme in Delhi: Delivery of primary healthcare to poor people residing in urban areas*. <https://doi.org/10.21203/rs.3.rs-4787883/v1>
36. Rony, M. K. K., Sharmi, P. D., & Alamgir, H. M. (2023). Addressing antimicrobial resistance in low and middle-income countries: overcoming challenges and implementing effective strategies. *Environmental Science and Pollution Research*, 30(45), 101896–101902. <https://doi.org/10.1007/s11356-023-29434-4>
37. Sacks, E., Schleiff, M., Were, M., Chowdhury, A. M., & Perry, H. B. (2020). Communities, universal health coverage and primary health care. *Bulletin of the World Health Organization*, 98(11), 773. <https://doi.org/10.2471/blt.20.252445>
38. Sah, T., Kaushik, R., Bailwal, N., & Tep, N. (2019). Mohalla Clinics in Delhi: A preliminary assessment of their functioning and coverage. *Indian Journal of Human Development*, 13(2), 195–210. <https://doi.org/10.1177/0973703019872023>
39. Sardesai, S., Mohanty, B. Center for studies of Developing Society and Lokniti: Delhi governance survey: Testing the twin pillars of health and education. Indian Express, New Delhi, December 11, 2019. p. 8. Available from: <https://indianexpress.com/article/cities/delhi/delhi-governance-survey-testing-the-twin-pillars-of-health-and-education-6160608/>. [Last accessed on 2020 Mar 31]
40. Sharma, M. G., Grover, A., Shekhawat, K., & Popli, H. (2023). Patient satisfaction with access, affordability and quality of diabetes care at Mohalla Clinics in Delhi, India. *Frontiers in Public Health*, 11. <https://doi.org/10.3389/fpubh.2023.1160408>
41. Sharma, S., & Sharma, J. (2018). *Mohalla Clinics: Providing quality healthcare to the deprived?* <https://doi.org/10.4135/9781526475118>
42. Sundararaman, T., & Gupta, G. (2011). Indian approaches to retaining skilled health workers in rural areas. *Bulletin of the World Health Organization*, 89, 73–77. <https://doi.org/10.2471/blt.09.070862>
43. Virmani, N., Mittal, I., & Lahariya, C. (2022). What brings people to government urban primary care facilities? A community-based study from Delhi, India. *Indian Journal of*

- Community and Family Medicine*, 8(1), 18-22.
https://doi.org/10.4103/ijcfm.ijcfm_26_21
44. Vigoda-Gadot, E. R. A. N., Shoham, A., Schwabsky, N., & Ruvio, A. (2008). PUBLIC SECTOR INNOVATION FOR EUROPE: A MULTINATIONAL EIGHT-COUNTRY EXPLORATION OF CITIZENS' PERSPECTIVES. *Public Administration*, 86(2), 307-329.
<https://doi.org/10.1111/j.1467-9299.2008.00731.x>
45. Vohra, R., & Thakur, H. (2022). A study on the availability and accessibility of healthcare services provided at Mohalla Clinics by the slum residents of Delhi. *International Journal of Community Medicine and Public Health*, 9(6), 2501-2506.
<https://doi.org/10.18203/2394-6040.ijcmph20221526>
46. Waara, Å. (2025). Examining digital government maturity models: Evaluating the inclusion of citizens. *Administrative Sciences*, 15(3), 73.
<https://doi.org/10.3390/admsci15030073>
47. Wu, D., Lam, T. P., Lam, K. F., Zhou, X. D., & Sun, K. S. (2017). Public views towards community health and hospital-based outpatient services and their utilisation in Zhejiang, China: a mixed methods study. *Bmj Open*, 7(11), e017611.
<https://doi.org/10.1136/bmjopen-2017-017611>
48. Yamini, & Bodkhe, N. (2022). Assessing the Effect of Mohalla Clinics on Healthcare System in Delhi: Evidence from a Primary Study in West District. *Indian Journal of Human Development*, 16(3), 493-512.
<https://doi.org/10.1177/09737030221143220>