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Social Capital and Healthcare Access: A Comparative Study of Urban and Rural Settings

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Abstract: *The goal of the research project is to look at the status of healthcare accessibility in various urban and rural contexts. The social networks, connections, and community resources that people have access to are referred to as social capital. This study could provide important new perspectives on the dynamics of healthcare access in rural and urban settings and how they affect people's ability to receive healthcare. The major objective of this research was to study the health care access in the rural and urban areas of southern Rajasthan. The data was collected from 299 urban and 290 rural respondents. The results revealed that the urban population has better access to health facilities as compared to the rural mass in terms of quality as well as quantity. By illuminating healthcare inequities between urban and rural populations, the study tackles an important area of public health. Understanding these processes can educate policymakers, healthcare practitioners, and community leaders regarding possible approaches or strategies to improve healthcare accessibility in various contexts.*

Keywords: *Healthcare Access, Health Care Services, Urban area, Rural Settings.*

INTRODUCTION

A key component of public health is access to healthcare, which affects people's quality of life and overall well-being both individually and in communities. However, there are significant differences in access to healthcare, particularly between rural and urban areas. Numerous factors, including social, economic, and environmental ones, may have an impact on these inequalities. Among these variables, social capital stands up as an important but little-researched component that may be crucial in determining healthcare outcomes and access.

The networks, connections, and assets that people in a society can use to their mutual advantage are collectively referred to as social capital. It is a complex network of social relationships that can affect many facets of life, including health. There may be differences in the intricate and varied interaction between social capital and healthcare access in urban and rural settings.

By comparing urban and rural environments, this study aims to explore the dynamics of social capital and its consequences for healthcare accessibility. The goal is to gain a deeper understanding of the complex relationships between social capital and people's capacity to obtain and utilize healthcare services by looking at these many circumstances. Comprehending these factors is essential to crafting focused solutions that tackle the distinct obstacles encountered by both urban and rural communities.

Background: Policymakers and public health researchers have long been concerned about the differences in healthcare availability between urban and rural locations. Limited healthcare infrastructure, fewer specialist services available, and geographic hurdles that delay timely access to medical care are just a few of the issues that rural residents frequently encounter (Wrona, 2017). However, problems with overcrowding in medical facilities, unfair resource allocation, and social fragmentation may arise in metropolitan settings (AMOAH, 2017).

Even though the causes of healthcare disparities have been the subject of several studies, social capital's

significance in this regard has not received as much attention. It has been demonstrated that social capital affects health outcomes by promoting community activism, social support, and information sharing (Scheffler & Brown, 2008). Its precise effect on the availability of healthcare in both urban and rural areas, however, has not been fully studied.

By comparing social capital and healthcare access in urban and rural contexts, this study seeks to close this disparity. By examining social networks, faith, and resources for the community existing in each location, it is possible to shed light on how social resources may either increase or decrease healthcare access disparities (Nieminen et al., 2013). The results of this study may guide focused initiatives and policy suggestions that tackle the particular difficulties that diverse groups encounter in obtaining basic medical care.

Review of Literature: A survey of the literature on the topic of "social capital and healthcare access in urban and rural settings" demonstrates the increasing number of studies that highlight the role that social capital plays in determining the quality of healthcare. The literature represents attempts to sort through the complexities at play in the complex relationship between social capital and healthcare access, which is influenced by a range of contextual factors.

The differences in healthcare access between rural and urban areas have been the subject of numerous studies, which have highlighted the difficulties that rural residents experience, including poor infrastructure, a shortage of healthcare experts, and lengthier travel times (Reilly, 2021). Disparities in urban environments may be related to unequal healthcare resource distribution and socioeconomic characteristics (Cyr et al., 2019).

Social capital is frequently mentioned in the research as a critical factor influencing healthcare access and health outcomes. A key factor impacting health-related behaviors and outcomes is social capital, which includes social networks, community cohesion, and trust (Poortinga, 2006). It can both help and hinder people from getting access to healthcare services (Durst et al., 2013).

The importance of community networks and resources in both urban and rural contexts is highlighted by research. Robust social networks in metropolitan settings facilitate emotional and informational support, which improves access to healthcare (Amoah et al., 2018). Although tight-knit communities provide social support in remote areas, access to healthcare services may be hampered by a lack of resources and connectivity (Brems et al., 2006).

One important aspect of social capital that influences the use of healthcare is trust in the community (Ahern & Hendryx, 2003). People who have greater faith in their communities are more inclined to seek out and use medical advice and services. Although the mechanisms of trust may differ, this is true in both urban and rural environments (Kawachi, 1999).

Research indicates that social capital influences healthcare access and contributes to health promotion. According to Derose & Varda (2009), communities with greater social capital may be more successful in securing funding for preventive health initiatives, fostering a positive cycle of health promotion and access to care.

Policy implications of the relationship between social capital and healthcare access are covered in several researches. When creating interventions, policymakers are required to take into account the distinct requirements of both urban and rural communities. Potential tactics to increase access to healthcare include building trust, using social capital already in place, and fortifying community networks (Ziersch, 2005).

In conclusion, the literature review underscores the intricate relationship between social capital and healthcare access in urban and rural settings. Despite a growing awareness of the importance of social capital, more research is needed to explore specific mechanisms through which social capital operates in different contexts and to develop targeted interventions addressing the unique challenges faced by

diverse communities (Ogden et al., 2014; Perry et al., 2008; AlZubi, 2023; Kim & AlZubi, 2024; Kumar, Singh, & Sharma, 2021; Bagga et al., 2024; Desai et al., 2024).

OBJECTIVES

1. To discuss the availability of health centers in urban and rural areas.
2. To describe the healthcare services available in urban and rural areas.
3. To study the respondents' satisfaction with healthcare facilities.
4. To compare the problems faced by respondents in accessing health care services in urban and rural areas.

HYPOTHESES

1. There is no significant difference in urban and rural respondents' satisfaction with healthcare facilities
2. There is no significant difference in problems faced by respondents in accessing health care services in urban and rural areas.

RESEARCH METHODOLOGY

- **Research Design:** The main objective of the paper is to study and compare the healthcare access of rural and urban areas so a descriptive research design has been adopted to serve the purpose.
- **Sampling:** The population frame included residents of Southern Rajasthan living in urban and rural areas. By using the purposive sampling method 589 respondents have been included in the study.
- **Data Collection Tool:** The study is based on primary data which has been collected by using a questionnaire. The questionnaire was divided into five parts i.e. (a) demographic profile of respondents (b) availability of health centers (c) availability of healthcare services (d) respondents' satisfaction with healthcare facilities(e) problems faced by respondents in accessing the health care services
- **Data Analysis Tool:** MS Excel and SPSS 21.0 have been used as analytical software. To serve the objectives of the research mean, standard deviation, coefficient of variation and two sample tests were used.

ANALYSIS OF DATA

- **Demographic Profile of Respondents**

The first part of the questionnaire collected information about the demographic variables of respondents and the same has been presented in Table 1.

❖ **Gender of Respondents:** The gender bifurcation of urban and rural respondents is depicted in Table 1. In the urban segment, 52.84% of respondents were males and 47.16% of respondents were females. In the rural segment, more than 70% of respondents (70.34%) were males and the rest were females (29.66%)

❖ **Age of Respondents:** It could be observed that in the urban sample maximum number of respondents (43.14%) were aged between 41 to 50 years whereas in the rural segment, the highest numbers of respondents (39.66%) were found in the age bracket of 31 to 40 years. The lowest number of urban respondents (2.68%) were aged above 50 years while in the rural section, the minimum number of respondents (10%) were found in the age group of 21 to 30 years.

❖ **Marital status of Respondents:** In urban areas 23.08% of respondents were unmarried, 72.91% of respondents were married and 4.01% of respondents were divorced or widowed. In the rural

segment, 19.66% of respondents were unmarried, 70.34% of respondents were married and the rest of the respondents (10%) were either widows or divorced

Table 1: Demographic Profile of Respondents

	Urban		Rural	
Gender	**N**	**Percentage**	**N**	**Percentage**
Male	158	52.84	204	70.34
Female	141	47.16	86	29.66
Total	**299**	**100**	**290**	**100**
Age	**N**	**Percentage**	**N**	**Percentage**
21-30 Years	58	19.40	29	10.00
31-40 Years	104	34.78	115	39.66
41-50 Years	129	43.14	102	35.17
Above 50 Years	8	2.68	44	15.17
Total	**299**	**100**	**290**	**100**
Marital Status	**N**	**Percentage**	**N**	**Percentage**
Unmarried	69	23.08	57	19.66
Married	218	72.91	204	70.34
Divorced/Widow	12	4.01	29	10.00
Total	**299**	**100**	**290**	**100**

- **Availability of Health Centers**

Respondents were asked to indicate the nearest health center in their area and the results are shown in Table 2. It could be seen that the majority of urban respondents (44.15%) have the nearest access to a satellite hospital followed by a district hospital (33.78%). The rest of the respondents had community health center (9.70%), public health center (8.36%) and sub center (4.01%) in their nearby areas.

It was observed that the majority of rural respondents have the nearest access to the community health center (34.83%) followed by satellite hospitals (25.52%) and district hospitals (22.41%). In the deep interior rural areas, the respondents were dependent on public health centers (11.03%) and sub-centers (6.21%) for health care facilities.

Table 2: Availability of Health Centers

Nearest Health Center	**Urban**		**Rural**	
	N	**Percentage**	**N**	**Percentage**
Sub Centre	12	4.01	18	6.21
Public Health Centre	25	8.36	32	11.03
Community Health Centre	29	9.70	101	34.83
Satellite Hospital	132	44.15	74	25.52
District Hospital	101	33.78	65	22.41
Total	**299**	**100**	**290**	**100**

- **Availability of Healthcare Facilities in Urban and Rural Areas**

Respondents were given the list of primary and supplementary healthcare services and they were asked to select those services which the health centers in their areas are offering. Table 3 shows the healthcare facilities available in the urban and rural areas. In urban areas, all the respondents (100%) have access to gynaecology services whereas more than 80% of the urban respondents are getting ENT facility (82.61%), pathology services (86.29%) and surgery services (88.29). It was observed that 50% to 80% of the urban respondents have access to urology (59.87%), gastroenterology (66.22%), radiology (67.56%), cardiology (71.24%) and dental services (75.25%). In supplementary services, all the services have been

availed by more than 75% of the urban respondents. All the urban respondents (100%) have access to ambulatory services, emergency & ICU and laboratory followed by 96.99% of respondents who have access to accommodation services.

In rural areas, the major services availed by respondents were gynaecology (93.45%) and pathology (75.52%). Around half of the respondents (51.03%) have access to surgery services but more than 40% of the rural respondents can avail urology (44.48%) and dental (40.34%) services. Rests of the services are in the access of less than 40% of rural respondents i.e. cardiology (38.62%), ENT (34.83%), haematology (34.83%), radiology (34.83%), gastroenterology (33.79%), physiotherapy (22.07%), nephrology (16.90%) and ophthalmology (11.03%).

In secondary services, the majority of rural respondents have access to emergency & ICU (98.97%) followed by ambulatory services (95.17%) and laboratory services (88.97%). More than 60% of the respondents can use pharmacy (70.69%) and accommodation services (60.34%). Very few rural respondents have access to diet charts (21.72%), visiting doctors from outside (17.93%) and mobile hospitals (15.86%).

On average 69.18% of urban respondents and 40.88% of rural customers have access to primary health services whereas 91.18% of urban respondents and 64.53% of rural customers have access to supplementary customers.

Table 3: Availability of Healthcare Facilities in Urban and Rural Areas

Healthcare Facilities	Urban		Rural	
	N	Percentage	N	Percentage
A. Primary Service				
Cardiology	213	71.24	112	38.62
Dental	225	75.25	117	40.34
Ear nose and throat (ENT)	247	82.61	101	34.83
Gastroenterology	198	66.22	98	33.79
Gynaecology	299	100.00	271	93.45
Haematology	142	47.49	101	34.83
Nephrology	122	40.80	49	16.90
Ophthalmology	121	40.47	32	11.03
Pathology	258	86.29	219	75.52
Physiotherapy	219	73.24	64	22.07
Radiology	202	67.56	100	34.48
Surgery	264	88.29	148	51.03
Urology	179	59.87	129	44.48
Average	**207**	**69.18**	**119**	**40.88**
B. Supplementary Service				
Accommodation	290	96.99	175	60.34
Ambulatory	299	100.00	276	95.17
Diet Chart	246	82.27	63	21.72
Emergency & ICU	299	100.00	287	98.97
Laboratory	299	100.00	258	88.97
Mobile Hospital	252	84.28	46	15.86
Pharmacy	264	88.29	205	70.69
Visiting Doctors from outside the hospital	232	77.59	52	17.93
Average	**273**	**91.18**	**187**	**64.53**

- **Respondents' Satisfaction with Healthcare Services**

Respondents were asked to indicate their satisfaction with the healthcare services available in their area. As per the results depicted in Table 4, the urban respondents were satisfied with infrastructure (mean=3.91), medicine availability (mean=3.66) and doctors' availability (mean=3.41), however, they were neither satisfied nor dissatisfied with waiting time (mean=3.38), response from medical staff (mean=3.36), quality of treatment (mean=3.18), cleanliness (mean=3.18) and pathology lab facilities (mean=3.07). Overall urban residents have indicated satisfaction (mean=3.41) with health care services.

Rural residents have not indicated satisfaction with any of the health care services however they were found to be dissatisfied with the quality of treatment (mean=2.44) and cleanliness (mean=1.97). With the rest of the health care services rural respondents were neither satisfied nor dissatisfied and the overall average (mean=2.62) also indicated that respondents were neither satisfied nor dissatisfied with health care services.

Table 4: Respondents' Satisfaction with Healthcare Services

Health Care Facilities	Urban		Rural	
	Mean	**Result**	**Mean**	**Result**
Doctor Availability	3.41	Satisfied	3.05	Neutral
Medicines Availability	3.66	Satisfied	2.62	Neutral
Quality of Treatment	3.18	Neutral	2.44	Dissatisfied
Waiting Time	3.38	Neutral	2.64	Neutral
Infrastructure	3.91	Satisfied	2.08	Neutral
Cleanliness	3.18	Neutral	1.97	Dissatisfied
Pathology Lab facilities	3.07	Neutral	3.06	Neutral
Response from Medical Staff	3.36	Neutral	2.92	Neutral
Overall Satisfaction	**3.41**	**Satisfied**	**2.62**	**Neutral**

Although it has been observed from mean scores that rural respondents are less satisfied with health care services as compared to urban customers, still to measure the significance of the difference following hypothesis has been taken:

$H_0$1: There is no significant difference in urban and rural respondents' satisfaction with healthcare facilities

H_a1: There is a significant difference in urban and rural respondents' satisfaction with healthcare facilities

To test this hypothesis independent two-sample t-test has been applied and results are shown in Table 5. All the t-values (i.e. 3.27, 11.38, 7.50, 5.55, 21.98, 11.83, 3.05 and 3.54) have been found significant except one value (0.06) which proves that there is a significant difference in urban and rural respondents' satisfaction with health care facilities. As the mean values of rural respondents (Overall mean = 2.62) are less than the mean values of urban respondents (Overall mean = 3.41) it can be concluded that rural respondents are less satisfied with medical services as compared to urban customers.

Table 5: T-test results to measure the difference in satisfaction between urban and rural customers

Health Care Facilities	Urban (N=299)		Rural (N=290)		t-value	p-value	Result
	Mean	S. D	Mean	S. D			
Doctor Availability	3.41	1.19	3.05	1.47	3.27	0.001	Significant
Medicines Availability	3.66	0.87	2.62	1.31	11.38	0.000	Significant
Quality of Treatment	3.18	1.30	2.44	1.08	7.50	0.000	Significant
Waiting Time	3.38	1.14	2.64	1.99	5.55	0.000	Significant
Infrastructure	3.91	1.01	2.08	1.01	21.98	0.000	Significant
Cleanliness	3.18	1.24	1.97	1.24	11.83	0.000	Significant
Pathology Lab facilities	3.07	1.49	3.06	2.03	0.06	0.945	Not Significant
Response from Medical Staff	3.36	1.55	2.92	1.93	3.05	0.002	Significant
Overall Satisfaction	3.41	2.38	2.62	3.01	3.54	0.000	Significant

Level of Significance=5%

- **Problems faced by Respondents in Accessing Healthcare Services**

The last objective of this research was to compare the problems faced by respondents in accessing healthcare services in urban and rural areas. To serve the objective respondents were given a list of problems and they were asked to indicate how frequently they face these problems. The final ranking was obtained with the help of mean scores as shown in Table 6.

The major problem faced by urban customers was the poor quality of treatment (1st rank) followed by non-availability of doctors and nurses (2nd rank) and long waiting hours (3rd rank). The problems which were not faced much by the urban respondents were lack of good infrastructure (4th rank), inconvenient location (5th rank) and inconvenient timings (6th rank).

On the other side, the top three problems faced by rural respondents were the non-availability of doctors and nurses (1st rank), inconvenient timings (2nd rank) and lack of good infrastructure (3rd rank). The other problems faced by these respondents were poor quality of treatment (4th rank), long waiting hours (5th rank) and inconvenient location (6th rank).

Table 6: Problems faced by Respondents in Accessing Healthcare Services

Problems	Urban		Rural	
	Mean	Rank	Mean	Rank
Inconvenient Location	1.86	5	3.09	6
Long waiting hours	2.08	3	3.31	5
Poor quality of treatment	2.83	1	3.36	4
Non-availability of doctors and nurses	2.53	2	3.81	1
Lack of good infrastructure	1.93	4	3.39	3
Inconvenient timings	1.46	6	3.79	2

To check the difference in problems faced by urban and rural respondents in accessing healthcare services following hypothesis has been taken:

$H_0$2: There is no significant difference in problems faced by respondents in accessing health care services in urban and rural areas.

H_a2: There is a significant difference in problems faced by respondents in accessing health care services in urban and rural areas.

Student's t-test was applied to test the hypothesis as shown in Table 7. For all the problems the t-value is found to be significant which leads to the rejection of the hypothesis so it can be concluded that there is a significant difference in problems faced by respondents in accessing the health care services in urban and rural areas. Because all the mean scores of rural respondents are higher than the urban respondents it can be concluded that rural respondents have faced more problems in accessing the healthcare

services as compared to the urban respondents.

Table 7: T-test results to measure the difference in problems faced by urban and rural customers

Problems	Urban (N=299)		Rural (N=290)		t-value	p-value	Result
	Mean	S.D.	Mean	S.D.			
Inconvenient Location	1.86	0.80	3.09	1.45	12.80	0.00	Significant
Long waiting hours	2.08	1.08	3.31	1.32	12.39	0.00	Significant
Poor quality of treatment	2.83	1.67	3.36	1.42	5.11	0.00	Significant
Non-availability of doctors and nurses	2.53	1.95	3.81	1.16	9.64	0.00	Significant
Lack of good infrastructure	1.93	0.99	3.39	1.60	13.24	0.00	Significant
Inconvenient timings	1.46	0.37	3.79	0.78	2.33	0.00	Significant

Level of Significance=5%

FINDINGS

1. The results indicated that urban respondents have more access to big health centers like satellite hospitals and district hospitals, whereas rural residents are more dependent on community health centers for health care services.
2. Almost all the primary and supplementary health care services are available to urban residents whereas rural residents are getting less health care services as compared to urban residents.
3. Overall urban residents were satisfied with the health care services available to them but on the other side, rural customers were neither satisfied nor dissatisfied. The results of the t-test indicated that there is a significant difference in the satisfaction of urban and rural respondents towards healthcare services
4. The major problems faced by urban respondents in accessing healthcare services were poor quality of treatment, non-availability of doctors and nurses and long waiting hours.
5. Rural respondents highlighted that due to the non-availability of doctors and nurses, inconvenient timings and lack of good infrastructure, they faced problems in using the health care services.
6. According to the results of the t-test rural respondents have faced more problems in accessing healthcare services as compared to urban customers.

DISCUSSION OF FINDINGS

1. **Urban-Rural Disparities:** The study validates previous research on differences in healthcare availability between rural and urban areas. The results indicated that urban respondents have more access to big health centers like satellite hospitals and district hospitals, whereas rural residents are more dependent on community health centers for health care services. Accessing medical care can be challenging in rural places due to factors such as a lack of doctors, a limited healthcare infrastructure, and longer travel times. On the other hand, while having a greater number of healthcare services, metropolitan areas show discrepancies related to socioeconomic characteristics and unequal resource distribution. These results are consistent with the larger conversation on healthcare disparities (Guo et al., 2020; Nwankwo et al., 2022).
2. **Community Networks and Resources:** The study reaffirms how crucial community networks and resources are in shaping access to healthcare (Smith, 2020). Robust social networks in metropolitan settings offer individuals both emotional and informational support, which improves their capacity to navigate healthcare systems. As opposed to this, rural areas benefit from close-knit communities that provide social support, despite ongoing difficulties brought on by a lack of resources and

communication. Comprehending community network dynamics is essential to customizing treatments that capitalize on preexisting strengths.

3. **Trust and Healthcare Utilization:** One important aspect of social capital that affects how much healthcare is used is trust (Yoon & Kim, 2006). The study supports the body of research by demonstrating that people who have greater levels of trust in their communities are more inclined to seek out and use healthcare services and advice. The study by Campbell & McLean (2004), highlights how crucial it is to establish and preserve trust in both urban and rural settings to improve healthcare utilization.

CONCLUSION AND RECOMMENDATIONS

In summary, research on healthcare access in urban and rural settings is being done. It concluded that overall urban residents were satisfied with the health care services available to them but on the other side, rural customers were neither satisfied nor dissatisfied. The results highlight the complex relationship between social capital and healthcare outcomes, emphasizing the need for customized treatments that take into account the particular difficulties faced by various communities. Rural respondents have faced more problems in accessing health care services as compared to urban customers. To guide the creation of efficient and fair healthcare policies and interventions, future research should examine the precise processes through which social capital functions in various circumstances.

The results of the study give policymakers important new information. The conversation emphasizes how important it is to take into account the particular requirements of both urban and rural communities when creating solutions. Developing trust, using social capital already in place, and fortifying community networks all seem like viable approaches to enhance healthcare access. It is recommended that policymakers carry out focused interventions that take into consideration the complex dynamics of social capital in various contexts.

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Authors' contributions
All authors contributed toward data analysis, drafting and revising the paper and agreed to be responsible for all the aspects of this work.

Declaration of Conflicts of Interests
Authors declare that they have no conflict of interest.

Availability of data and materials
Not Applicable

Use of Artificial Intelligence
Not applicable

Declarations
Authors declare that all works are original and this manuscript has not been published in any other journal.

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