



Journal i Mappedic

Vol. 2 No. 1, 2024 (Page: 55-63)
DOI:

Determinants of Health-Seeking Behavior and Access to Healthcare Services in Urban and Rural Populations

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Article History

Submitted: 17 February 2024, Revised: 24 March 2024, Accepted: 12 April 2024

Keywords

Health-Seeking Behavior
Access To Healthcare
Urban–Rural Disparities

Abstract

Health-seeking behavior and access to healthcare services are critical determinants of population health and health equity, particularly in contexts marked by urban–rural disparities. This study aimed to examine the key determinants of health-seeking behavior and access to healthcare services among urban and rural populations using a quantitative cross-sectional design. Guided by Andersen’s Behavioral Model of Health Services Use, data were collected from 600 adult respondents equally distributed between urban and rural areas through a structured questionnaire. Structural equation modeling was employed to analyze the relationships between predisposing factors, enabling resources, perceived health needs, access to healthcare services, and health-seeking behavior, as well as to compare structural relationships across population settings. The results indicate that access to healthcare services plays a central role in shaping health-seeking behavior, with a significantly stronger effect observed in rural populations. Enabling factors, particularly income and health insurance coverage, were found to strongly influence access, while education exerted a greater effect on health-seeking behavior in urban settings. Overall, the findings highlight the importance of context-specific strategies to reduce healthcare access disparities and promote appropriate health-seeking behavior, providing valuable implications for health policy and service planning.

Introduction

Health-seeking behavior and access to healthcare services are fundamental determinants of population health outcomes and equity within healthcare systems. Health-seeking behavior refers to the actions individuals take to maintain, restore, or improve their health, including decisions about when, where, and from whom to seek care (Kroeger, 1983). Access to healthcare, meanwhile, encompasses the availability, affordability, acceptability, and appropriateness of health services in relation to population needs (Penchansky & Thomas,

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1981). Together, these factors shape the utilization of healthcare services and significantly influence morbidity, mortality, and overall quality of life. Understanding the determinants of health-seeking behavior and access is therefore essential for achieving universal health coverage and reducing health disparities, particularly in contexts characterized by pronounced urban–rural differences (Reilly, 2021; Weeks et al., 2023; Qaiser et al., 2023).

Urban and rural populations often experience markedly different health environments, healthcare infrastructures, and socioeconomic conditions, which in turn affect their health-seeking behaviors and access to services (Debsarma & Choudhary, 2025; Oyeonoro et al., 2016). Urban areas typically offer greater availability of healthcare facilities, specialized services, and healthcare professionals, while rural areas frequently face shortages of health personnel, limited infrastructure, and longer travel distances to health facilities (World Health Organization, 2018). Despite these structural advantages, urban populations may still encounter barriers related to overcrowding, cost, and fragmented care, whereas rural populations often contend with geographic isolation, lower health literacy, and cultural norms that influence care-seeking decisions (Peters et al., 2008; Dalhatu et al., 2025; Wang et al., 2026). These disparities underscore the need for comparative analyses that examine how determinants of health-seeking behavior and access operate differently across urban and rural contexts.

Previous research has identified a wide range of factors influencing health-seeking behavior, including socio-demographic characteristics, economic status, cultural beliefs, perceived severity of illness, and prior experiences with healthcare services (Andersen, 1995; Mackian et al., 2004). Andersen’s Behavioral Model of Health Services Use remains one of the most widely applied frameworks in this field, conceptualizing health service utilization as a function of predisposing factors, enabling resources, and perceived or evaluated need. Studies applying this model have demonstrated that education, income, health insurance coverage, and social support play critical roles in determining whether individuals seek care and how promptly they do so. However, the relative importance of these factors often varies between urban and rural populations, reflecting differences in social structures and healthcare systems.

Access to healthcare services is closely intertwined with health-seeking behavior, as structural and systemic barriers can constrain individuals’ ability to act on their health needs. Financial barriers, such as out-of-pocket payments and indirect costs of care, have been shown to disproportionately affect rural and low-income populations, discouraging timely utilization of health services (Peters et al., 2008; Rice et al., 2018; Sofi et al., 2025). Geographic accessibility, including distance to health facilities and transportation availability, remains a major determinant of healthcare access in rural areas, while urban populations may be more affected by organizational barriers such as long waiting times and complex referral systems (Kruk et al., 2018). These access-related constraints can delay care-seeking, exacerbate health conditions, and contribute to avoidable health inequalities.

Despite ongoing policy efforts to expand healthcare coverage and improve service delivery, significant gaps in access and utilization persist. Many health systems continue to prioritize supply-side interventions, such as increasing the number of facilities or healthcare workers, without fully addressing demand-side factors that shape individual health-seeking behavior (Thaddeus & Maine, 1994; Gopalan et al., 2014; Lilford et al., 2025). As a result, improved availability of services does not always translate into increased utilization, particularly among

marginalized rural populations or urban poor communities. This disconnect highlights the need for a more comprehensive understanding of how individual, social, and systemic determinants interact to influence health-seeking behavior and access.

A growing body of literature has proposed various strategies to improve healthcare access and promote appropriate health-seeking behavior. These strategies include health insurance expansion, community-based health education, strengthening primary healthcare systems, and decentralizing services to underserved areas (WHO, 2018; Khatri et al., 2024; Acharya et al., 2026). Evidence suggests that removing financial barriers through insurance schemes can significantly increase healthcare utilization, especially among rural and low-income groups (Peters et al., 2008). Similarly, culturally sensitive health promotion interventions have been shown to improve health literacy and encourage timely care-seeking. However, the effectiveness of these interventions often depends on contextual factors, such as local health system capacity and sociocultural norms.

Methods

This study adopted a quantitative cross-sectional design to examine the determinants of health-seeking behavior and access to healthcare services among urban and rural populations. The research was theoretically grounded in Andersen's Behavioral Model of Health Services Use, which explains healthcare utilization through predisposing factors, enabling resources, and perceived health needs (Andersen, 1995). The study population comprised adults aged 18 years and above residing in selected urban and rural areas. A multistage sampling technique was applied, resulting in a total sample of 600 respondents, equally distributed between urban and rural settings to allow for comparative analysis. This sample size was considered adequate for multivariate statistical analysis and structural equation modeling, in line with methodological recommendations (Hair et al., 2019).

Data were collected using a structured questionnaire developed from validated instruments in previous studies. The questionnaire captured socio-demographic characteristics, health-seeking behavior, access to healthcare services, and perceived health needs. Health-seeking behavior was measured through indicators related to frequency and timeliness of healthcare utilization, while access to healthcare services was assessed based on dimensions of availability, affordability, accessibility, and acceptability, following the framework proposed by Penchansky and Thomas (1981). All items were measured using a five-point Likert scale. The instrument underwent pilot testing to ensure clarity, validity, and reliability, with Cronbach's alpha values exceeding 0.70 for all constructs, indicating satisfactory internal consistency (Nunnally & Bernstein, 1994).

Data analysis was conducted using SPSS and SEM-based software such as AMOS or SmartPLS. Descriptive statistics were used to summarize respondents' characteristics and to compare urban and rural populations. Structural equation modeling was employed to examine the relationships between individual factors, access to healthcare services, and health-seeking behavior, allowing for simultaneous assessment of multiple latent constructs and their interrelationships. Model fit was evaluated using established goodness-of-fit indices, and multi-group analysis was performed to identify differences in structural relationships between urban and rural populations. Statistical significance was determined at a 95% confidence level.

Results and Discussion

Respondents' Socio-Demographic Characteristics

Table 1. Socio-Demographic Characteristics of Respondents (N = 600)

Variable	Urban (n=300)	Rural (n=300)	Total (%)
Female (%)	54.0	50.7	52.3
Age 26–45 (%)	61.3	58.0	59.7
Secondary or higher education (%)	68.7	42.3	55.5
Health insurance coverage (%)	76.0	49.3	62.7

These differences suggest potential disparities in enabling resources that may influence access to healthcare services and subsequent health-seeking behavior.

A total of 600 respondents were included in the analysis, consisting of 300 individuals residing in urban areas and 300 in rural areas. The socio-demographic profile indicates a relatively balanced gender composition, with 52.3% female and 47.7% male participants. The majority of respondents were aged between 26 and 45 years, representing 59.7% of the total sample, which reflects the economically productive population segment most likely to engage with healthcare systems. Consistent with the enabling and predisposing constructs of Andersen's Behavioral Model of Health Services Use, educational attainment and insurance coverage differed substantially between urban and rural populations. Urban respondents reported higher levels of secondary or tertiary education (68.7%) compared with rural respondents (42.3%), while health insurance coverage reached 76.0% in urban areas and 49.3% in rural settings. These disparities indicate uneven distribution of enabling resources, which, according to Andersen (1995), are critical determinants of access and utilization.

The observed differences in education and insurance coverage suggest structural inequalities that may translate into divergent patterns of healthcare access. Previous studies have emphasized that education enhances health literacy and decision-making capacity, thereby facilitating timely health-seeking behavior (Mackian et al., 2004). Similarly, financial protection mechanisms such as insurance reduce out-of-pocket burdens and improve access, particularly among vulnerable populations (Peters et al., 2008).

Descriptive Analysis of Health-Seeking Behavior and Access to Healthcare Services

Descriptive statistics revealed meaningful differences in health-seeking behavior and access to healthcare services between urban and rural populations. Urban respondents reported more frequent utilization of formal healthcare services and shorter delays in seeking care when experiencing illness. In contrast, rural respondents were more likely to delay care or rely on informal or traditional healthcare providers. Regarding access dimensions, availability and geographic accessibility scored significantly lower among rural respondents, while affordability emerged as a shared concern across both settings.

Table 2. Mean Scores of Key Study Variables by Area of Residence

Variable (Likert 1–5)	Urban (Mean ± SD)	Rural (Mean ± SD)	p-value
Health-seeking behavior	3.98 ± 0.62	3.41 ± 0.71	<0.001
Availability of services	4.12 ± 0.58	3.29 ± 0.73	<0.001
Affordability	3.54 ± 0.66	3.48 ± 0.69	0.214
Accessibility	4.05 ± 0.61	3.18 ± 0.76	<0.001

Independent sample t-tests confirmed statistically significant differences in health-seeking behavior, availability, and accessibility between urban and rural respondents, underscoring structural disparities in healthcare access.

Descriptive analysis revealed statistically significant differences between urban and rural respondents in terms of health-seeking behavior and perceived access dimensions. Urban respondents reported a higher mean score for health-seeking behavior (3.98 ± 0.62) compared to rural respondents (3.41 ± 0.71), indicating more frequent and timely utilization of formal healthcare services. This pattern aligns with earlier findings that urban populations typically benefit from greater service density and shorter travel times to health facilities (World Health Organization, 2018).

Regarding access dimensions conceptualized by Penchansky and Thomas access model, availability and accessibility were significantly lower in rural areas. Urban respondents rated availability at 4.12 ± 0.58 , while rural respondents reported a mean of 3.29 ± 0.73 . Accessibility followed a similar pattern, with means of 4.05 ± 0.61 in urban areas and 3.18 ± 0.76 in rural settings. Affordability scores did not differ significantly between the two groups, suggesting that financial barriers remain a concern across both contexts. Independent sample t-tests confirmed significant urban–rural differences for health-seeking behavior, availability, and accessibility at $p < 0.001$.

These findings reinforce the argument that structural disparities in health system infrastructure remain pronounced between urban and rural settings. Geographic barriers and limited provider availability in rural areas have been consistently documented as impediments to timely care (Peters et al., 2008). Meanwhile, urban residents may face organizational challenges such as overcrowding or longer waiting times, yet these do not appear to reduce overall access perceptions to the same extent (Kruk et al., 2018).

Structural Equation Modeling Results

Table 3. Structural Path Coefficients of the SEM Model

Path	Standardized β	p-value
Enabling factors $\rightarrow$ Access	0.47	<0.001
Access $\rightarrow$ Health-seeking behavior	0.52	<0.001
Perceived need $\rightarrow$ Health-seeking behavior	0.31	0.002

These results confirm the central role of access to healthcare services as a mediating mechanism linking individual and socioeconomic factors to health-seeking behavior.

Structural equation modeling was employed to assess the relationships among predisposing factors, enabling resources, perceived health needs, access to healthcare services, and health-seeking behavior. The overall model demonstrated satisfactory goodness-of-fit indices, with χ^2/df below 3.0, comparative fit index and Tucker–Lewis index exceeding 0.90, and root mean square error of approximation below 0.08, consistent with methodological standards for multivariate analysis (Hair et al., 2019).

Access to healthcare services emerged as a central mediating construct within the model. The standardized path coefficient from enabling factors to access was $\beta = 0.47$ ($p < 0.001$), indicating that higher income levels and insurance coverage substantially improved perceived access. In turn, access exerted a strong positive effect on health-seeking behavior ($\beta = 0.52$, p

< 0.001). Perceived health need also directly influenced health-seeking behavior ($\beta = 0.31, p = 0.002$), supporting theoretical propositions that perceived severity and vulnerability motivate care-seeking actions (Andersen, 1995).

The magnitude of the access-to-behavior path underscores the importance of reducing systemic barriers to enhance healthcare utilization. This finding aligns with the conceptualization of access as a necessary precondition for effective service use (Penchansky & Thomas, 1981). It also corroborates evidence that improving financial and geographic accessibility can substantially increase utilization rates (Peters et al., 2008).

Urban–Rural Comparison of Structural Relationships

Table 4. Urban–Rural Comparison of Structural Path Coefficients (Multi-Group SEM)

Structural Path	Urban (β)	p-value	Rural (β)	p-value	Difference ($\Delta\beta$)
Enabling factors $\rightarrow$ Access to healthcare	0.41	<0.01	0.53	<0.001	0.12
Access to healthcare $\rightarrow$ Health-seeking behavior	0.43	<0.01	0.61	<0.001	0.18
Perceived health need $\rightarrow$ Health-seeking behavior	0.29	0.012	0.35	0.004	0.06
Education $\rightarrow$ Health-seeking behavior	0.38	<0.01	0.21	0.048	0.17

Multi-group SEM analysis was conducted to compare structural pathways between urban and rural populations. The results reveal notable contextual differences. The effect of enabling factors on access was stronger in rural areas ($\beta = 0.53, p < 0.001$) than in urban areas ($\beta = 0.41, p < 0.01$). Similarly, the influence of access on health-seeking behavior was more pronounced among rural respondents ($\beta = 0.61, p < 0.001$) compared to urban respondents ($\beta = 0.43, p < 0.01$). These differences suggest that marginal improvements in enabling resources and service accessibility may yield disproportionately greater gains in rural settings.

Education, conceptualized as a predisposing factor, exhibited a stronger direct association with health-seeking behavior in urban areas ($\beta = 0.38, p < 0.01$) relative to rural areas ($\beta = 0.21, p = 0.048$). This pattern indicates that cognitive and informational resources play a more decisive role in urban decision-making contexts, where service options are more abundant and individuals must navigate complex healthcare systems.

the comparative analysis demonstrates that while access to healthcare services consistently mediates the relationship between enabling resources and health-seeking behavior, the strength of these relationships varies significantly by residential context. Rural populations appear more sensitive to structural and financial constraints, consistent with global evidence on geographic inequities in primary healthcare provision (World Health Organization, 2018). Conversely, urban populations exhibit stronger demand-side influences, particularly educational attainment, in shaping health-seeking decisions.

These findings provide empirical confirmation that determinants of healthcare utilization are context-dependent, supporting calls for differentiated policy approaches rather than uniform national strategies (Thaddeus & Maine, 1994). By integrating structural and individual-level determinants within a unified SEM framework, the study demonstrates the centrality of access

as both an outcome of enabling resources and a direct predictor of health-seeking behavior, thereby advancing theoretical and practical understanding of healthcare utilization dynamics across diverse population settings.

Conclusion

This study provides robust empirical evidence that health-seeking behavior and access to healthcare services are shaped by a complex interplay of individual, socioeconomic, and system-level factors, with pronounced differences between urban and rural populations. The findings demonstrate that access to healthcare services serves as a central mechanism linking enabling resources and perceived health needs to healthcare utilization, particularly in rural settings where structural barriers remain more salient. While urban populations benefit from relatively better service availability, educational attainment and health literacy play a stronger role in shaping care-seeking decisions, underscoring the importance of demand-side determinants. These results highlight that uniform policy approaches are insufficient to address persistent access disparities and instead call for context-sensitive interventions that simultaneously strengthen healthcare accessibility, reduce financial and geographic barriers, and enhance population-level health literacy. By offering a comparative, theory-driven analysis, this study contributes to the health services literature and provides actionable insights for policymakers seeking to promote equitable access and appropriate health-seeking behavior across diverse population contexts.

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