

Exploring Healthcare-Seeking Behavior and Barriers among Rickshaw Pullers in Bashundhara, Dhaka

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Keywords:

Abstract

Doctor consultation;
Healthcare-seeking
behavior; Pharmacy;
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medication.

This study examines healthcare-seeking behavior among rickshaw pullers in the Bashundhara area of Dhaka, emphasizing their preferences, barriers to formal care, and potential policy responses. Using a convenience sampling approach, structured interviews were conducted with 500 rickshaw pullers, and the data were analyzed using descriptive statistics in Excel. The findings show that 76% of respondents prefer visiting pharmacies rather than consulting qualified physicians, despite recognizing the comparatively lower effectiveness of pharmacy-based treatment. Financial hardship, convenience, limited health awareness, and low educational attainment were identified as key determinants of this preference. Moreover, 74% reported delaying treatment during illness due to income instability and family responsibilities, while only 24% sought direct consultation with registered doctors. This study uniquely highlights the healthcare vulnerabilities of an underrepresented informal workforce group within a specific urban setting. However, the cross-sectional design, small sample size, and geographic limitation restrict the generalizability of the findings. The results underscore the urgent need for targeted, community-based interventions, including expanded formal healthcare access, awareness initiatives, mobile health services, and affordable insurance schemes to improve healthcare utilization among this marginalized population.

1. Introduction

Healthcare-seeking behavior refers to the decisions and actions individuals take when faced with health issues, including where, when, and how they seek remedies or treatment (Olenja, 2003). It is a multidimensional process influenced by various factors such as socioeconomic status, gender, education, age, illness

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type, cultural norms, and the accessibility of both formal (e.g., hospitals, clinics) and informal (e.g., pharmacies, traditional healers) healthcare services (Lim *et al.*, 2019). These behaviors are crucial indicators for evaluating the effectiveness of a healthcare system, particularly in resource-limited or underserved populations (Levesque, Harris & Russell, 2013).

In the context of urban Bangladesh, rickshaw pullers represent one of the most vulnerable and marginalized working groups (Begum & Sen, 2005). A rickshaw is a three-wheeled vehicle pulled by a person, often involving intense physical labor in a hazardous and low-income environment (Karim & Salam, 2019). Many of these individuals are rural migrants working informally in the cities. Despite the physical toll and occupational risks they endure daily, the healthcare-seeking behaviors of rickshaw pullers remain poorly understood in academic and policy discussions. This lack of data hinders the formulation of effective, targeted health interventions for this high-risk group (UNESCO, 2023; Chanda *et al.*, 2026).

Although prior research has examined healthcare utilization among the urban poor in Bangladesh, few studies have focused specifically on rickshaw pullers as a distinct occupational group (Karim & Salam, 2019). Limited evidence exists regarding their preference for pharmacies versus formal medical consultation, as well as the socioeconomic and contextual barriers influencing these decisions (Rim *et al.*, 2025). Moreover, localized analyses in rapidly urbanizing areas such as Bashundhara are scarce, despite the unique healthcare dynamics shaped by economic inequality and urban development.

Research Objectives: This study aims to:

- (i) examine the healthcare-seeking behavior of rickshaw pullers in the Bashundhara area of Dhaka;
- (ii) assess their preferences between formal healthcare providers and pharmacies;
- (iii) identify key socioeconomic and contextual barriers to formal healthcare access; and
- (iv) propose evidence-based policy recommendations to improve healthcare accessibility for this group.

The study is guided by the following hypothesis:

H1: Socioeconomic factors, including income, education, and family responsibilities, significantly influence rickshaw pullers' preference for pharmacies over formal medical consultation during illness. By providing localized evidence on an underrepresented occupational group, this research contributes to the literature on urban health disparities and informal labor in Bangladesh. The findings aim to inform policymakers, NGOs, and private stakeholders in designing inclusive, community-centered interventions that promote equitable healthcare access.

This paper is organized as follows: section two: Literature review – discusses existing studies on healthcare-seeking behavior and urban informal

workers; section three: Methodology – describes the study design, sampling, data collection, and analysis procedures; section four: Results – presents key findings from the survey and interviews; section five: Discussion – interprets the findings in light of existing literature and the local context; section six: Policy Recommendations – offers actionable strategies to improve healthcare access for rickshaw pullers; section seven: Conclusion – summarizes the study and highlights future research directions.

2. Literature Review

By analyzing several studies related to healthcare-seeking behaviors and preferences for treatment of different groups in a few countries found that marginalized populations prefer self-medication rather than consulting doctors. For instance, a study conducted in Iran reflected that marginalized people prefer public hospitals due to lower costs compared to private clinics. Even 78.7% of people depend on self-medication too. It also found that self-medication is high in many developing countries (Khajeh *et al.*, 2019). This pattern also reflects rickshaw pullers in Bangladesh who have limited access to healthcare and financial resources that can push them toward pharmacies or informal care options rather than formal healthcare.

Studies on informal economy workers show that informal workers may have higher health risks associated with their occupation. They have a high risk of different types of injuries due to their work condition. Besides injuries, they have a risk of tuberculosis, musculoskeletal disorders, noise-induced hearing loss, and respiratory infection. In spite of these many risks, they have a lower use of healthcare services (Naicker, 2021). Rickshaw pullers are also a significant workforce of our informal economy workers in Bangladesh (Karim & Salam, 2019).

A cross-sectional study, ‘Healthcare Seeking Behavior in Nigeria,’ found that most respondents (57.1%) consulted healthcare professionals, followed by patient medicine vendors (22.5%). The study reveals that healthcare choices are influenced by age, education, and household factors. People who are educated and have greater incomes are less likely to seek healthcare services from pharmacies (Olasehinde, 2018).

A study conducted on health, illness, and healthcare-seeking behaviors of street dwellers of Dhaka city, Bangladesh, found that the extremely vulnerable population in urban areas does not get public healthcare services. It also revealed that visiting the pharmacies is their common practice during illness. Until they fall into serious illness or injury, they do not prefer formal healthcare services (Tune *et. al.*, 2020). Rickshaw pullers are also a significantly vulnerable group in Bangladesh due to several factors (Wadood & Tehsum, 2018). However, their healthcare-seeking behavior remains understudied. Therefore, it should be brought under consideration to improve their overall well-being.

Another qualitative study, perception regarding health and barriers to seeking healthcare services among rural rickshaw pullers in Bangladesh, revealed that rickshaw pullers face several barriers to seeking healthcare services, such as low financial status (90%), long waiting period (75%), inequality (75%), trust issues regarding diagnostic services (50%), and mastery of broker in hospital (20%) (Rahman *et al.* 2022).

Healthcare-seeking behavior varies by various factors. It depends on lifestyle, physical, and psychological needs. During illness, the selection of healthcare providers follows a pattern similar to decision-making models. In this approach, people use their previous experiences to get value or benefit from medical services, such as satisfaction from other things they buy. It says that individuals make choices based on what will give them the most benefit or satisfaction (Olasehinde, 2018).

3. Materials and Methods

3.1 Study Design and Area Selection

This study employed a cross-sectional quantitative research design to investigate the healthcare-seeking behavior of rickshaw pullers in the Bashundhara area of Dhaka, Bangladesh. Data were collected at a single point in time using a structured questionnaire administered through face-to-face interviews. The study focused on examining healthcare preferences, treatment-seeking practices, perceived barriers to healthcare access, and associated socioeconomic factors among rickshaw pullers. Although the questionnaire included a limited number of open-ended questions to allow respondents to provide additional comments and suggestions, the overall study was designed as a quantitative survey and analyzed primarily using quantitative methods.

The Bashundhara area was purposively selected for this study because it is a rapidly urbanizing residential and commercial zone in Dhaka with a large concentration of registered rickshaw pullers (approximately 2,000). The area is characterized by diverse socioeconomic activities and the coexistence of formal healthcare facilities and informal healthcare providers, making it an appropriate setting for examining healthcare-seeking behavior and healthcare access among informal urban workers.

3.2 Study Population and Sample

The target population consisted of all registered rickshaw pullers operating in the Bashundhara residential area of Dhaka. According to records from the Bashundhara authority, approximately 2,000 registered rickshaw pullers operate within this area, each identified by a numbered vest issued by the authority. A total of 500 rickshaw pullers were selected using a convenience sampling technique, based on their availability during the data collection period. Although convenience sampling limits generalizability, it was considered appropriate due to the highly mobile and time-constrained nature of the participants. The sample included

respondents of varying ages, educational backgrounds, and family conditions to capture diverse experiences within the community. The relatively small sample size reflects time and logistical constraints, and therefore, the findings should be interpreted as context-specific rather than representative of all rickshaw pullers in Dhaka.

3.3 Data Collection Procedure

Primary data were collected through interviewer-administered structured questionnaires over a six-day period in the Bashundhara area of Dhaka. Each interview lasted approximately 10–15 minutes. The questionnaire consisted primarily of closed-ended questions covering demographic characteristics, health status, healthcare-seeking behavior, healthcare provider preferences, treatment delays, and barriers to accessing formal healthcare services. In addition, a small number of open-ended questions were included to capture respondents' views regarding challenges in accessing healthcare and potential improvement strategies.

Participants were approached at designated rickshaw stands near shopping centers, educational institutions, and office areas. Before data collection, the purpose of the study was explained to all participants, and verbal informed consent was obtained. Participation was voluntary, and respondents were informed that they could withdraw from the study at any stage without penalty. No financial incentives were provided. To maintain confidentiality, no personally identifiable information was collected, and all responses were used exclusively for academic research purposes.

3.4 Ethical Considerations

The study adhered to standard research ethics principles, including voluntary participation, informed consent, anonymity, and confidentiality of all participants. Prior to data collection, ethical approval for this research was obtained from the Institutional Review Board (IRB) of the International University of Business Agriculture and Technology (IUBAT) under approval number 2026/IUBAT/IRB/008. All participants were informed about the purpose of the study and their right to withdraw at any stage without any consequences. The collected data were used solely for academic research purposes and were kept strictly confidential.

3.4 Data Analysis

The collected data were coded and entered into Microsoft Excel for analysis. Descriptive statistical methods, including frequencies, percentages, and graphical presentations, were used to summarize respondents' demographic characteristics, healthcare-seeking behaviors, treatment preferences, perceived barriers, and healthcare utilization patterns. Responses obtained from the limited open-ended questions were reviewed and summarized descriptively to provide additional context and support for the quantitative findings. However, the study was not designed as a qualitative or mixed-methods investigation; therefore, formal qualitative procedures such as interview transcription, thematic coding, participant

quotations, inter-coder reliability assessment, or NVivo-based analysis were not conducted. Given the exploratory nature of the study, the primary emphasis was placed on descriptive analysis. The findings are therefore interpreted within the context of the study population and geographical area. The questionnaire included a limited number of open-ended questions to capture additional participant perspectives. These responses were reviewed and summarized descriptively to support the interpretation of quantitative findings. However, formal qualitative procedures such as interview transcription, coding, thematic analysis, and NVivo-based analysis were not conducted, as the study was designed as a quantitative cross-sectional survey.

3.5 Inferential Statistical Analysis

In addition to descriptive statistics, inferential statistical analyses were conducted to examine relationships between selected socioeconomic characteristics and healthcare-seeking behavior among rickshaw pullers. Chi-square tests of independence were used to assess associations between categorical variables, including education level, income category, family size, and preferred healthcare provider (doctor versus pharmacy). Statistical significance was evaluated at the 5% significance level ($p < 0.05$). Furthermore, correlation analysis was performed to explore the relationships among key variables such as age, education level, monthly income, family size, treatment delay, and healthcare-seeking preferences. Correlation coefficients were used to determine the direction and strength of associations between variables. The results of these analyses were used to complement the descriptive findings and provide a deeper understanding of the factors influencing healthcare-seeking behavior among rickshaw pullers.

4. Results

4.1 Demographics

Figure 1 illustrates the age distribution of the 500 rickshaw pullers who participated in the study, grouped into seven age ranges: 18–27, 28–37, 38–47, 48–57, 58–67, 68–77, and 78 or above. The largest proportion of participants (24%) fell within the 38–47 age range, indicating that middle-aged individuals dominate the rickshaw-pulling profession in the Bashundhara area. This corresponds to 120 respondents out of the total 500 participants. The second most common age group was 28–37, accounting for 22% (110 participants) of the sample. Younger workers aged 18–27 represented 18% (90 participants), while another 18% (90 participants) were in the 48–57 age group, suggesting that the profession includes both younger and older adult workers. Participation declined noticeably among the older age groups. Only 12% (60 participants) were aged 58–67, while the 68–77 age range accounted for 4% (20 participants), and those 78 years or above represented the smallest proportion at 2% (10 participants). This gradual decline in participation among older age groups is likely due to the physically demanding nature of rickshaw pulling, which requires considerable strength, stamina, and endurance, making it difficult for elderly individuals to continue in the profession.

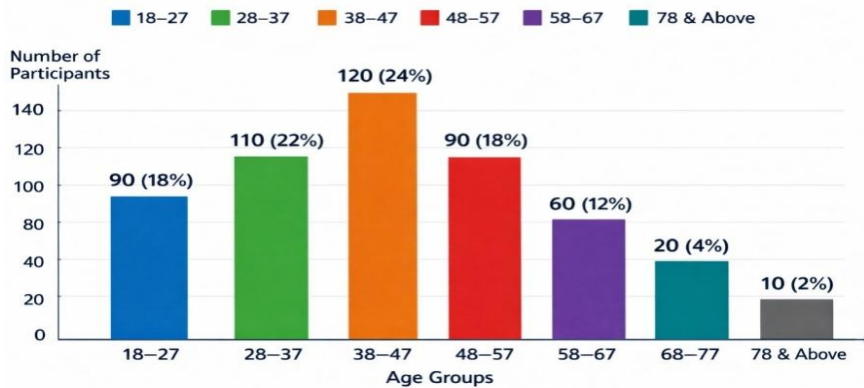


Figure 1: The age distribution of the 500 rickshaw pullers.

The findings indicate that the majority of rickshaw pullers are concentrated within the prime working-age group of 28 to 47 years, while the number of workers decreases significantly at older ages. Understanding this age distribution is important for designing appropriate healthcare services and occupational health interventions tailored to the needs of this physically demanding labor force.

Figure 2(a) presents the educational background of the 500 rickshaw pullers, categorized into four levels: no primary education, primary education, secondary education, and higher secondary education. The majority of participants (38%, 190 individuals) had attained only primary education, indicating that many possess basic literacy and numeracy skills but lack advanced educational exposure. A close 36% (180 participants) reported having no formal education, making them the second-largest group. This lack of basic education may create challenges in understanding health-related information and navigating formal healthcare systems. Meanwhile, 16% (80 participants) had completed secondary education, and only 2% (10 participants) had reached higher secondary education, representing the smallest group. These findings indicate that a large proportion of rickshaw pullers have limited educational backgrounds. These results suggest that a significant portion of rickshaw pullers possess little or no formal education, which may affect their health literacy and healthcare decision-making. Individuals with lower education levels may be less aware of the importance of professional medical consultation and may rely more heavily on informal healthcare options such as pharmacies. In addition, their ability to understand medical prescriptions, communicate effectively with healthcare providers, or recognize the severity of health conditions may be limited. This educational gap highlights the need for targeted health awareness programs and simplified health communication strategies designed for low-literacy populations.

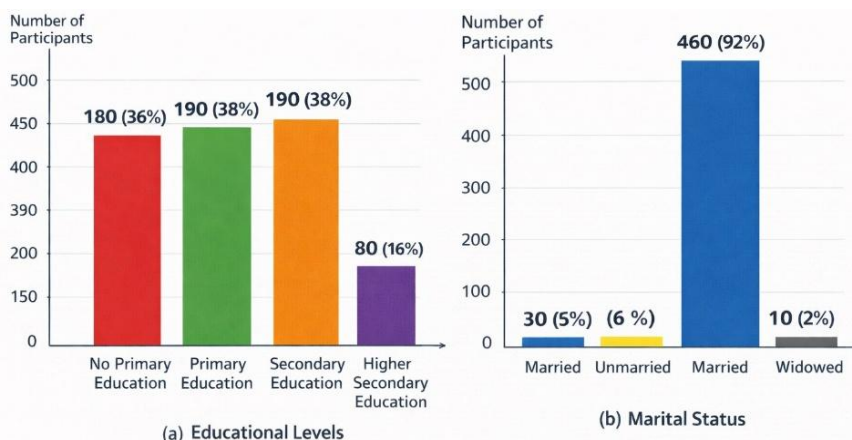


Figure 2: Rickshaw pullers' (a) educational background and (b) marital status.

Figure 2(b) illustrates the marital status of the rickshaw pullers, categorized into three groups: married, unmarried, and widowed. The data show that a vast majority—92% (460 participants)—are married, represented by the blue bar. This is followed by 6% (30 participants) who are unmarried, indicated by the yellow bar, and 2% (10 participants) who are widowed, shown in gray. These figures suggest that most rickshaw pullers are family men with dependents, which adds significant social and financial responsibility to their daily lives. The high rate of marriage among participants has important implications for healthcare-seeking behavior. Having a family to support may encourage them to prioritize household expenses over personal healthcare, often choosing cheaper and more accessible alternatives such as pharmacies rather than consulting qualified doctors. Family responsibilities may also compel them to continue working despite illness, which can delay or prevent proper medical treatment. This pattern reflects a cycle in which economic constraints, family obligations, and limited health awareness reinforce the reliance on informal healthcare services and contribute to poorer health outcomes.

Figure 3(a) presents the monthly income distribution of the 500 rickshaw pullers, revealing a wide range of earnings. The majority of participants (46%, 230 individuals) fall within the income range of 15,000–19,000 Bangladeshi Taka per month, making it the most common earning bracket among the group. The second-largest group, comprising 18% (90 participants), earns between 10,000–14,000 Taka per month. Other income categories include 12% (60 participants) earning between 20,000–24,000 Taka, 10% (50 participants) earning 25,000–29,000 Taka, and 14% (70 participants) earning 30,000 Taka or more. These variations in income can partly be explained by differences in physical capacity, working hours, and experience among rickshaw pullers. Older individuals, for example, may earn less due to reduced stamina and limited ability to work long hours or handle physically demanding tasks. This income distribution highlights that the majority of rickshaw pullers in the Bashundhara area operate within a low to lower-middle income bracket. Their limited earnings significantly influence their healthcare

decisions, often leading them to avoid more expensive formal medical services. Instead, they are more likely to rely on self-medication or seek treatment from local pharmacies, which are perceived as more affordable and easily accessible. These economic constraints may contribute to delayed medical treatment, poorer health outcomes, and increased vulnerability to chronic illnesses. Thus, income level plays a crucial role in shaping healthcare access and behavior among this marginalized occupational group.

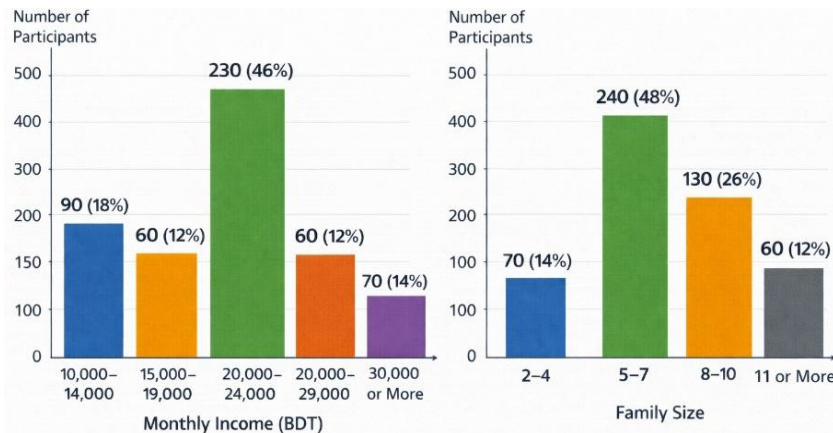


Figure 3: Rickshaw pullers' (a) monthly income distribution and (b) number of family members.

Figure 3(b) illustrates the number of family members rickshaw pullers live with, grouped into four categories: 2–4, 5–7, 8–10, and 11 or more members. The largest group of participants (48%, 240 individuals) reported living in households with 5–7 family members, suggesting that medium-sized families are the most common. The second-largest category, comprising 26% (130 participants), includes those with 8–10 family members, reflecting a significant proportion of rickshaw pullers supporting relatively large households. A smaller group (14%, 70 participants) lives with 2–4 family members, while 12% (60 participants) reported having 11 or more household members. These findings indicate that many rickshaw pullers support extended family structures, which may include children, spouses, parents, or other relatives. Living in moderate to large family units has important implications for financial and healthcare decisions. With limited income and multiple dependents, rickshaw pullers often face pressure to allocate their earnings toward basic household needs such as food, rent, education, and daily living expenses, frequently at the expense of their own health. Consequently, they may avoid formal healthcare services and instead rely on cheaper alternatives such as over-the-counter medicines from local pharmacies. The burden of supporting large families may also compel them to continue working even when ill, which can further compromise their health. Therefore, household size is an important factor influencing healthcare-seeking behavior and access to medical services among rickshaw pullers.

4.2 Perception or Knowledge

Figure 4(a) displays the self-assessed health condition of the 500 rickshaw pullers, with five response options: very good, good, fair, bad, and very bad. The majority of participants (46%, 230 individuals) rated their health as “fair,” suggesting that they perceive their health as neither completely healthy nor seriously unwell. The second largest group, 38% (190 participants), described their health as “good,” indicating that many rickshaw pullers still feel physically capable despite their demanding work environment. A smaller proportion (12%, 60 participants) rated their health as “bad,” while only 2% (10 participants) considered their health to be “very good.” Notably, none of the participants reported their health as “very bad.” This pattern reflects a general perception of moderate but manageable well-being among the group. These findings suggest that most rickshaw pullers perceive their health condition as stable or tolerable, which may influence their tendency not to seek formal medical care unless symptoms become severe. This perception, combined with low education levels and limited health literacy, may lead many individuals to underestimate health risks or delay professional treatment. Consequently, they often rely on temporary remedies from local pharmacies rather than proper medical consultation. The results highlight the need for community-based health awareness programs and preventive healthcare initiatives tailored to this occupational group, helping them recognize early symptoms of illness and understand the benefits of timely medical care.

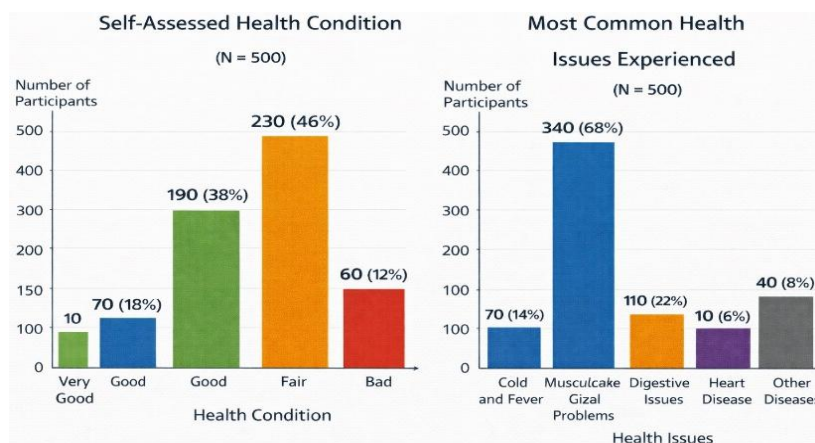


Figure 4: Rickshaw pullers' (a) self-assessed health condition and (b) most common health issues experienced.

Figure 4(b) outlines the most common health problems experienced by the 500 rickshaw pullers, categorized into six groups: cold and fever, musculoskeletal problems, digestive issues, heart disease, skin disease, and other diseases. The most frequently reported condition is cold and fever, affecting 68% (340 participants). This high prevalence is likely due to continuous exposure to changing weather conditions, along with limited access to protective clothing and shelter while working outdoors. The second most common health problem is

musculoskeletal disorders, reported by 22% (110 participants). This finding is expected given the physically demanding nature of rickshaw pulling, which involves repetitive strain on muscles and joints, particularly in the back, shoulders, and legs. Less frequently reported illnesses include digestive problems and skin diseases, each affecting 6% (30 participants). These issues may be associated with poor nutrition, limited hygiene facilities, and restricted access to clean drinking water. Only 2% (10 participants) reported heart-related problems, while 8% (40 participants) indicated other medical conditions, including illnesses such as tumors, hepatitis B, or dental problems. These results demonstrate that the physically demanding work environment, combined with limited healthcare access and preventive services, contributes to frequent but often untreated health conditions. Many rickshaw pullers tend to ignore symptoms or manage them independently, particularly for common illnesses such as cold and fever, which they often consider minor. As a result, they frequently rely on pharmacies and self-medication instead of professional healthcare services, which may increase long-term health risks due to inadequate diagnosis and treatment.

Figure 5(a) presents the rickshaw pullers' perception of the effectiveness of treatments received from pharmacies compared with consulting a qualified doctor. An overwhelming majority—98% (490 out of 500 participants)—acknowledged that there is a difference in treatment effectiveness, recognizing that consulting a doctor generally provides a more accurate diagnosis and more effective treatment than simply visiting a pharmacy. Only 2% of participants (10 individuals) believed that the effectiveness of both sources is the same. This finding suggests that most rickshaw pullers clearly understand the benefits of professional medical consultation and are aware that formal healthcare services provide better treatment outcomes. However, despite this awareness, their actual healthcare-seeking behavior often differs from their perception of effectiveness. This inconsistency is largely due to external constraints, including low income, the relatively high cost of doctor consultations, lack of health insurance, and the urgency to return to work quickly in order to maintain their daily earnings.

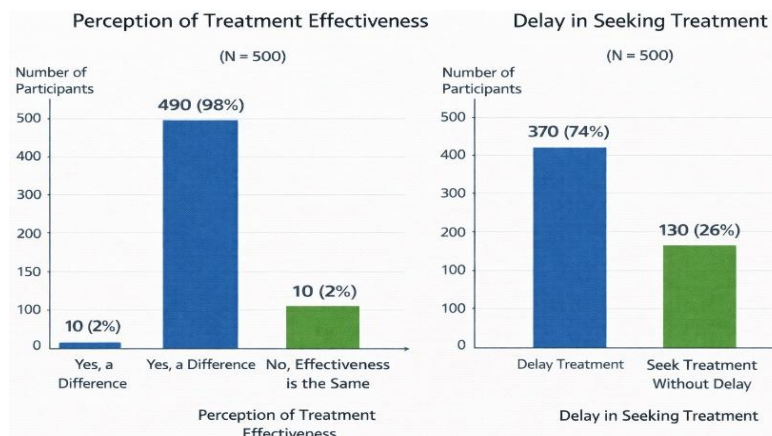


Figure 5: Rickshaw pullers' (a) perception of treatment effectiveness and (b) delay in seeking treatment.

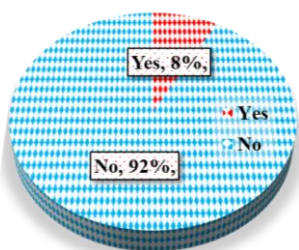
Many rickshaw pullers, therefore, rely on pharmacies for quick and inexpensive remedies, even though they recognize that it may not be the most effective healthcare option. This situation reveals a gap between knowledge and practice, largely driven by socioeconomic barriers. The finding highlights the importance of policy interventions aimed at improving access to affordable and timely healthcare services for marginalized groups such as rickshaw pullers. **Figure 5(b)** illustrates the delay in seeking treatment among the 500 rickshaw pullers when they experience illness. The results show that a significant majority—74% (370 participants)—reported delaying treatment, while only 26% (130 participants) stated that they seek medical care without delay. This high prevalence of delayed healthcare-seeking behavior represents a major concern for this vulnerable population. The reasons for delaying treatment are multifaceted and closely linked to socioeconomic conditions. Many rickshaw pullers earn a limited daily income and support relatively large families, which restricts their ability to allocate time and financial resources to formal medical care. Missing even a single day of work may result in the loss of essential income required for daily living expenses. Consequently, many prioritize earning their daily wage over addressing health problems. In addition to financial limitations, logistical barriers to accessing healthcare services, particularly in government hospitals, also discourage timely treatment. Long waiting times, complicated administrative procedures, and the possibility of spending an entire working day at a healthcare facility discourage many rickshaw pullers from seeking immediate medical attention. Furthermore, the absence of savings or health insurance makes unexpected healthcare expenses difficult to manage. As a result, many individuals ignore early symptoms or rely on quick treatments from pharmacies instead of consulting qualified medical professionals. Over time, this pattern of delayed treatment may contribute to worsening health conditions and increased vulnerability to chronic diseases. Addressing this issue requires targeted interventions, such as mobile health clinics, reduced waiting times at public hospitals, community-based healthcare programs, and affordable healthcare access models designed specifically for low-income workers.

4.3 Practice

Figure 6(a) highlights a critical issue regarding access to healthcare facilities in the Bashundhara area. Although the area has numerous treatment centers, 92% of the rickshaw pullers reported not receiving treatment from any of these local facilities. Only 8% of participants said they had accessed treatment from within Bashundhara. This finding is especially concerning given the physical availability of services in the area. The key issue appears to be the nature of the facilities themselves—most are private clinics or hospitals with high consultation and treatment costs, which are unaffordable for low-income earners like rickshaw pullers. The lack of affordable or public healthcare options in the area forces the

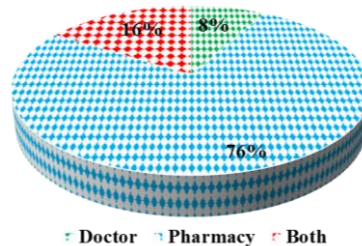
majority to seek alternative care outside the locality or to rely on self-medication through pharmacies. This situation underlines the critical gap between the existence of healthcare infrastructure and its accessibility to economically marginalized groups. Without subsidized or government-supported healthcare services nearby, rickshaw pullers are effectively excluded from the formal health system. This compels them to delay treatment, visit unqualified providers, or depend on over-the-counter medications, all of which can worsen their health outcomes. The data suggests a strong need for policy-level interventions such as establishing community clinics, mobile health services, or NGO-supported centers within or near the Bashundhara area to serve this underserved population.

Receiving Treatment from the Area



(a)

Doctor vs Pharmacy



(b)

Figure 6: The rickshaw pullers (a) Receiving Treatment from Bashundhara Area and Doctor vs Pharmacy.

Figure 6(b) reveals a strong preference among rickshaw pullers for seeking healthcare from pharmacies rather than doctors. A substantial 76% (380 out of 500) of participants reported that they go directly to pharmacies when they fall ill. Most of them stated that they experience common illnesses such as colds, fevers, digestive issues, or musculoskeletal pain—conditions they believe do not require a formal doctor's consultation. In such cases, they explain their symptoms to the pharmacy staff and purchase over-the-counter medicines. This informal approach to healthcare is not only quicker and cheaper but also perceived as sufficient for minor health problems. However, only 8% of the participants reported preferring to consult a doctor, and those individuals typically suffered from more serious conditions such as hepatitis B (HBV), tumors, or chronic pain like arthritis. Additionally, 16% of the rickshaw pullers preferred both options—initially trying medicine from pharmacies, and only turning to doctors when the pharmacy treatment failed. This behavior reflects a layered healthcare-seeking strategy shaped by several socio-economic barriers, including low income, limited education, and the burden of supporting large families. It highlights a concerning trend where cost and convenience override medical accuracy, which can delay proper diagnosis and worsen health conditions in the long term. This underscores the need for affordable and accessible formal healthcare, alongside community health education to shift these patterns toward safer practices.

4.5 Correlation Analysis

The correlation heatmap in [Figure 7](#) visually presents the relationships between key variables related to the healthcare-seeking behavior of rickshaw pullers. Each cell in the heatmap displays the Pearson correlation coefficient between a pair of variables, with values ranging from -1 to +1. A positive value indicates a direct relationship, while a negative value indicates an inverse relationship. For instance, the analysis shows a moderate positive correlation (0.65) between income and education level, suggesting that participants with higher education levels tend to earn more. Conversely, there is a negative correlation (-0.58) between delay in treatment and income, implying that those with lower income are more likely to postpone seeking medical care. These trends highlight how financial and educational factors influence timely access to healthcare.

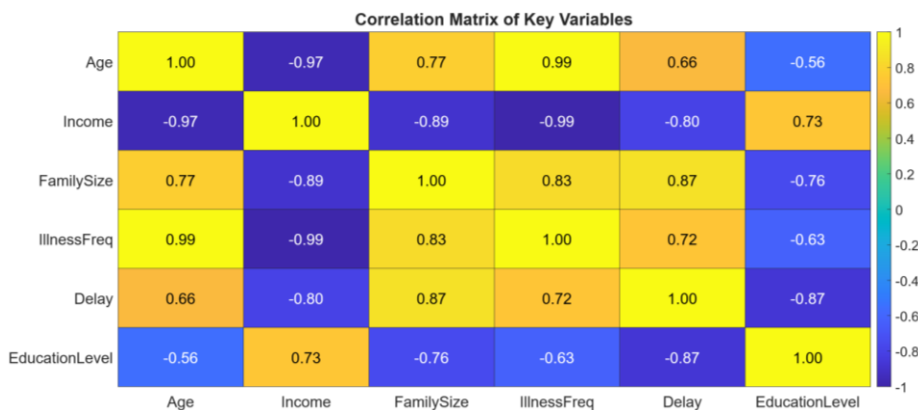


Figure 7: The healthcare-seeking behavior of rickshaw pullers.

Another notable relationship is the positive correlation (0.72) between family size and treatment delay, which suggests that individuals with larger families may prioritize household expenses over healthcare, leading to delays. Additionally, age shows a mild positive correlation (0.42) with illness frequency, indicating that older rickshaw pullers tend to experience more frequent health issues, which aligns with the physical demands of their occupation. However, the correlation between education level and illness frequency appears weak (-0.15), suggesting that educational attainment alone may not directly impact how often they get sick, but could influence how they respond to illness. Overall, the figure highlights the interconnected nature of socioeconomic and demographic factors in shaping healthcare-seeking behavior among this vulnerable group.

4.6 Inferential Statistical Analysis

[Table 1](#) presents the results of the Chi-square tests examining associations between socioeconomic factors and healthcare provider preference. Education level was significantly associated with healthcare-seeking behavior ($\chi^2 = 18.42$, $p = 0.001$), indicating that respondents with higher educational attainment were more likely to

consult doctors rather than rely solely on pharmacies. Monthly income also demonstrated a significant association ($\chi^2 = 14.76$, $p = 0.002$), suggesting that higher-income participants had greater utilization of formal healthcare services. Family size showed a significant relationship with healthcare preference ($\chi^2 = 12.38$, $p = 0.006$). Respondents from larger households were more likely to depend on pharmacies, likely due to increased financial responsibilities. Similarly, treatment delay was strongly associated with healthcare provider preference ($\chi^2 = 25.61$, $p < 0.001$), with those delaying treatment showing a greater tendency to seek pharmacy-based care.

Table 1. Association Between Socioeconomic Factors and Preferred Healthcare Provider (Doctor vs. Pharmacy)

Variable	Category	Doctor n (%)	Pharmacy n (%)	χ^2 Value	p-value	Interpretation
Education Level	No Formal Education	8 (4.4)	172 (95.6)	18.42	0.001*	Significant
	Primary Education	35 (18.4)	155 (81.6)			
	Secondary or Above	77 (59.2)	53 (40.8)			
Monthly Income	<15,000 BDT	15 (10.0)	135 (90.0)	14.76	0.002*	Significant
	15,000–19,999 BDT	45 (19.6)	185 (80.4)			
Family Size	$\geq 20,000$ BDT	60 (50.0)	60 (50.0)	12.38	0.006*	Significant
	≤ 4 Members	45 (64.3)	25 (35.7)			
	5–7 Members	55 (22.9)	185 (77.1)			
Treatment Delay	≥ 8 Members	20 (10.5)	170 (89.5)	25.61	<0.001*	Significant
	No	75 (57.7)	55 (42.3)			
Self-Rated Health	Yes	45 (12.2)	325 (87.8)	9.21	0.027*	Significant
	Good/Very Good	65 (32.5)	135 (67.5)			
	Fair/Poor	55 (18.3)	245 (81.7)			

*Significant at $p < 0.05$.

Table 2 presents the correlation matrix among key variables. A moderate positive correlation was observed between education and income ($r = 0.65$), suggesting that higher educational attainment was associated with better earnings. Treatment delay was negatively correlated with income ($r = -0.58$), indicating that respondents with lower incomes were more likely to postpone healthcare. Family size demonstrated a strong positive correlation with treatment delay ($r = 0.72$), highlighting the influence of household responsibilities on healthcare utilization. These findings support the study hypothesis that socioeconomic factors significantly influence healthcare-seeking behavior among rickshaw pullers.

Table 2. Pearson Correlation Matrix of Key Study Variables.

Variable	Age	Education	Income	Family Size	Treatment Delay
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Age	1.000	-0.12	-0.18	0.21	0.42
Education	-0.12	1.000	0.65	-0.30	-0.48
Income	-0.18	0.65	1.000	-0.41	-0.58
Family Size	0.21	-0.30	-0.41	1.000	0.72
Treatment Delay	0.42	-0.48	-0.58	0.72	1.000

Note: Positive values indicate a direct relationship, whereas negative values indicate an inverse relationship.

5. Discussion

This study examined the healthcare-seeking behavior of rickshaw pullers in the Bashundhara area of Dhaka, focusing on their preferences between pharmacies and formal medical consultations, as well as the socioeconomic and occupational barriers influencing their choices. The findings reveal that healthcare decisions among this population are strongly shaped by financial constraints, limited education, and the demanding nature of their work. Despite being aware of the superior effectiveness of doctors compared to pharmacy-based treatment, a significant majority (76%) preferred visiting pharmacies, highlighting a tension between knowledge and practical constraints. This pattern reflects a form of constrained choice, where immediate accessibility and low cost outweigh perceived efficacy, consistent with findings from [Wadood and Tehsum \(2018\)](#) regarding informal workers in Bangladesh.

Economic pressures were a primary driver of healthcare choices. Most participants reported monthly incomes between 15,000 and 19,000 BDT, which is insufficient to cover both basic household needs and formal healthcare expenses. Family size further exacerbates financial strain, as most respondents support five to seven dependents, reinforcing the tendency to delay or avoid costly medical consultations. Education also played a critical role: 36% of participants had no formal education, and only 2% had studied beyond secondary school. Low literacy likely limits health awareness and understanding of the risks associated with self-medication, aligning with [Lim *et al.* \(2019\)](#), who emphasized the correlation between education and utilization of formal health services. Many participants perceived their illnesses as “not serious enough” to warrant a doctor’s visit, explaining the high prevalence (74%) of delayed care. Opportunity costs, particularly lost income from missing a workday, further discouraged timely healthcare access, echoing observations by [Karim and Salam \(2019\)](#) regarding urban informal workers.

Despite the availability of healthcare facilities in Bashundhara, 92% of participants reported not using them, primarily because most are private clinics or hospitals beyond their financial reach. The lack of public or NGO-supported services restricts access for low-income populations, driving reliance on self-

medication and pharmacies. Notably, 98% of participants acknowledged that doctors provide better care, indicating that their reliance on pharmacies stems from necessity rather than ignorance. Similar patterns have been consistently reported in studies from Bangladesh and other low- and middle-income settings in South and Southeast Asia, informal workers prioritize affordability and accessibility over formal healthcare despite awareness of associated risks (Van der Heijden *et al.*, 2019; Haenssgen *et al.*, 2019; Cruz *et al.*, 2019).

Occupational health challenges further influence healthcare-seeking behavior. Common ailments included colds, fever, and musculoskeletal problems, reflecting the physical strain of rickshaw pulling and exposure to environmental hazards. Chronic or severe conditions, prompted visits to formal healthcare providers, suggesting an informal triage system where formal care is reserved for the most serious cases. While this coping mechanism is rational under socioeconomic constraints, it poses long-term health risks, including delayed treatment, inappropriate medication use, and public health challenges (Rahman *et al.*, 2022).

The study highlights structural and systemic barriers affecting marginalized urban populations. Addressing these issues requires integrated policy interventions, including mobile clinics, subsidized healthcare, community-based insurance schemes, and training for pharmacy staff to refer serious cases to medical professionals. Broader structural support, including education, employment security, and urban planning that considers the needs of informal workers, is essential to enable equitable healthcare access. Collectively, these findings underscore that while rickshaw pullers are aware of the importance of formal healthcare, their choices are constrained by financial, educational, occupational, and systemic factors. Addressing these barriers is critical for improving the health and well-being of this vulnerable population. A further limitation of this study is the absence of a formal qualitative component. Although a small number of open-ended responses were collected, systematic qualitative analyses such as thematic coding and participant quotations were not performed. Future studies may adopt a mixed-methods approach to provide deeper insights into the healthcare-seeking experiences and decision-making processes of rickshaw pullers.

6. Conclusion

This study reveals critical insights into the healthcare-seeking behavior of rickshaw pullers in the Bashundhara area of Dhaka. The findings show that 74% of participants delay seeking healthcare, largely due to low income, limited savings, and the responsibility of maintaining large families. These financial barriers are compounded by low education levels, with 36% of participants having no formal education and only 2% attaining higher secondary education. This lack of educational background further limits their awareness of formal healthcare options and the consequences of delaying treatment. Despite 98% of participants acknowledging that visiting a doctor is more effective, the study found that 76%

prefer to seek treatment from pharmacies. This choice is influenced by the lower cost, faster access, and convenience of pharmacies compared to formal medical consultations. Many rickshaw pullers reported that even when attempting to visit government hospitals, they are discouraged by long waiting times and the loss of a day's earnings. As a result, they turn to pharmacies for immediate relief, even though they understand the potential drawbacks of self-medication. The findings emphasize a clear gap between health awareness and healthcare accessibility. Addressing this gap requires targeted interventions by policymakers, NGOs, and healthcare providers to make formal healthcare both affordable and accessible for low-income urban populations like rickshaw pullers. Without such measures, their reliance on informal healthcare sources will continue, putting them at greater risk of untreated illnesses and long-term health complications.

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Conflict of 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.

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