STUDY OF THE AWARENESS OF AIDS AMONG RICKSHAW PULLERS IN PATNA DURING 2023

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Abstract

Human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) remain important public health concerns because prevention depends strongly on accurate awareness, risk perception, stigma reduction and timely testing. Informal urban transport workers such as rickshaw pullers represent a socially and economically vulnerable occupational group because they often work long hours, have unstable income, limited health-service contact and variable exposure to formal health education. This proposed cross-sectional study examines the awareness of AIDS among rickshaw pullers in Patna during 2023. The paper presents the rationale, objectives, conceptual background, review of literature, methodology, analytical indicators, ethical safeguards and expected contribution of the study. The proposed design includes structured interviews with rickshaw pullers regarding basic knowledge of HIV/AIDS, transmission routes, prevention methods, misconceptions, testing awareness, treatment awareness and attitude toward people living with HIV. The central argument is that AIDS awareness should not be measured only by whether a person has heard the term AIDS; it should be evaluated through correct knowledge, rejection of myths, willingness to seek testing, non-stigmatizing attitudes and access to prevention services. The study may help public health planners design targeted information, education and communication interventions for mobile and informal worker groups in Patna.

Keywords: AIDS awareness, HIV, rickshaw pullers, Patna, health education, knowledge, stigma, prevention, testing, urban informal workers, public health

1. Introduction

HIV/AIDS continues to be a major public health issue, even though major progress has been achieved in prevention, testing and antiretroviral therapy. Awareness is one of the most important components of HIV prevention because HIV transmission can be reduced through accurate knowledge about sexual transmission, safe practices, condom use, testing, treatment adherence and avoidance of blood-related risks. At the same time, misinformation and stigma continue to discourage people from seeking testing and treatment. Therefore, awareness studies remain relevant for identifying knowledge gaps among vulnerable and hard-to-reach groups.

Rickshaw pullers constitute an important part of the urban informal economy in Patna. Many of them migrate from rural or peri-urban areas, work for long hours at railway stations, bus stands, markets and crowded transport points, and may have limited access to regular health education. Their livelihood conditions often include low income, irregular meals, physical stress, poor health-seeking behaviour and dependence on informal social networks for information. These conditions make them an important group for studying awareness of AIDS and related preventive practices.

The focus of this paper is not to label rickshaw pullers as a high-risk group by occupation alone. Rather, the study recognizes that occupational mobility, limited education, poor access to services and lack of targeted communication may create gaps in awareness. Public health programmes are most effective when they understand the local knowledge level, beliefs and misconceptions of specific communities. Therefore, a localized study among rickshaw pullers in Patna can provide useful insight for designing practical awareness and counselling interventions.

The proposed study is positioned for January 2024 publication and therefore considers the public health context

available up to 2023. Global and national literature emphasizes that HIV prevention requires continued community engagement, testing access, stigma reduction and targeted information. In India, national HIV control strategies have historically relied on awareness, condom promotion, counselling and testing services, and outreach to vulnerable populations. However, awareness among informal workers often remains uneven and context-specific, requiring local assessment.

1.1 Research Problem

The research problem is that rickshaw pullers in Patna may have heard about AIDS, but their depth of knowledge regarding transmission, prevention, testing, treatment and stigma may be incomplete or influenced by myths. General awareness does not always translate into correct preventive understanding or willingness to access services. There is limited localized academic documentation on AIDS awareness among rickshaw pullers in Patna during 2023. Without such information, public health educators may not be able to design targeted and culturally appropriate information, education and communication strategies for this occupational group.

1.2 Objectives of the Study

- To assess the level of awareness of AIDS among rickshaw pullers in Patna during 2023.
- To examine knowledge regarding major routes of HIV transmission and methods of prevention.
- To identify common misconceptions and myths related to AIDS among the study participants.
- To assess awareness regarding HIV testing, counselling services and treatment availability.
- To examine attitude toward people living with HIV/AIDS and willingness to seek health information.
- To identify socio-demographic and occupational factors associated with higher or lower awareness.
- To develop recommendations for targeted AIDS awareness interventions among urban informal workers in Patna.

Table 1. Research objectives, analytical focus and supporting literature

Objective area	Analytical focus	Main supporting sources
Awareness level	Meaning of AIDS, basic knowledge and self-reported exposure to information	NACO (2023); UNAIDS (2023)
Transmission knowledge	Sexual transmission, blood transmission, needle sharing and parent-to-child transmission	WHO (2023); CDC (2022)
Prevention knowledge	Condom use, safe injection, testing and counselling, and prevention of myths	Park (2021); NACO (2023)
Stigma and attitude	Willingness to interact with people living with HIV and rejection of discriminatory beliefs	Nyblade et al. (2019); UNAIDS (2021)
Informal worker relevance	Occupational mobility, education, media exposure and access to health services	Dandona et al. (2017); Giri et al. (2010)

2. Conceptual Background

2.1 AIDS Awareness and Public Health Behaviour

AIDS awareness refers to more than simple familiarity with the term AIDS. It includes knowledge of HIV as the causative virus, understanding of transmission routes, awareness of preventive measures, knowledge of testing services, awareness that antiretroviral therapy can improve survival, and rejection of false beliefs. A person may have heard about AIDS through television, posters or peers, but may still hold incorrect beliefs about casual contact, mosquito bites, sharing food or social interaction with people living with HIV. Therefore, awareness must be assessed through multiple domains rather than a single question.

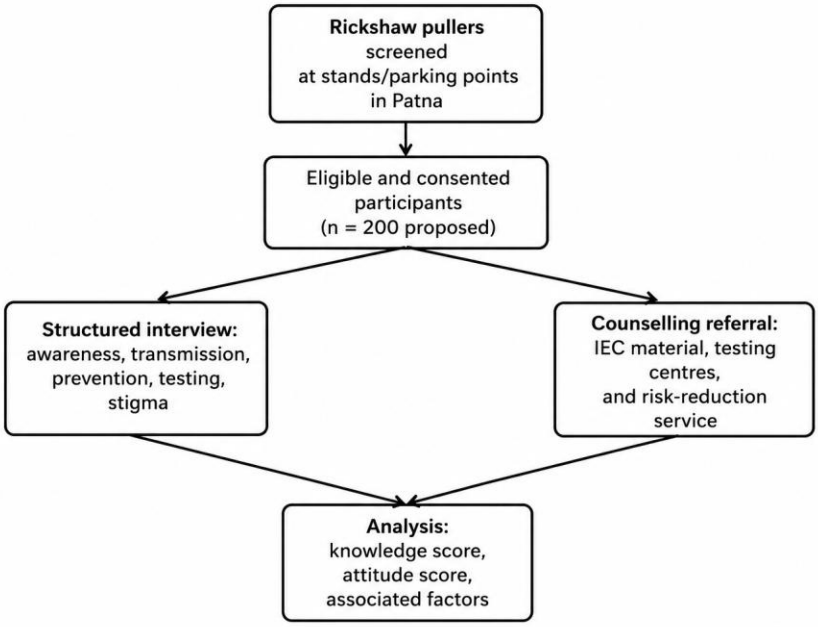
Public health behaviour is strongly influenced by knowledge, perceived risk, social norms, stigma and access to services. If a person understands HIV transmission but fears social judgment, he may still avoid testing. If a person knows that condoms prevent transmission but cannot discuss condom use or cannot access them, knowledge may not lead to behaviour change. For this reason, AIDS awareness studies should examine knowledge, attitude and service-

related awareness together.

2.2 Rickshaw Pullers as an Urban Informal Worker Group

Rickshaw pullers are part of the informal transport workforce and are often economically vulnerable. They work in highly mobile public spaces and interact daily with passengers, vendors, transport workers and other urban groups. Their working environment makes them visible in the city, but their access to structured health education may remain limited. Many workers depend on daily earnings and may not prioritize preventive health unless services are nearby, free, non-stigmatizing and clearly communicated.

Studying awareness among rickshaw pullers is relevant because occupational groups with low formal education and irregular work schedules may not be adequately reached through clinic-based programmes. Outreach at rickshaw stands, railway stations, bus stands and market areas can provide opportunities for focused awareness, counselling and referral. A study in Patna can therefore help translate general HIV prevention messages into worker-specific public health strategies.



3. Review of Literature

Global literature on HIV/AIDS emphasizes that the HIV response requires sustained prevention, testing, treatment and community awareness. UNAIDS has repeatedly highlighted that ending AIDS as a public health threat requires addressing inequalities, stigma and service gaps. WHO guidance also emphasizes prevention through accurate information, testing, antiretroviral treatment and reduction of discrimination. These global perspectives support the need for awareness studies among groups that may remain underserved by routine health communication.

Indian HIV/AIDS control literature shows the importance of targeted interventions, counselling and testing services, condom promotion and community-based awareness. NACO publications and India HIV estimates provide the national context for HIV prevention and care. Although HIV prevalence has declined over time in many settings, continued awareness remains necessary because misinformation, stigma and late testing can weaken prevention efforts. Urban informal workers may not be consistently covered by school-based, workplace-based or clinic-based awareness programmes.

Earlier studies among transport workers and auto-rickshaw drivers have shown that many participants may have heard of HIV/AIDS but may have incomplete knowledge about transmission and prevention. Research among auto-rickshaw drivers reported awareness gaps and the need for targeted health education. Such findings are relevant to rickshaw pullers because both groups work in public transport spaces and may share similar occupational mobility, peer

networks and barriers to formal health education. However, cycle-rickshaw pullers may face even greater economic vulnerability and lower access to health information.

The literature also shows that stigma remains a major barrier to HIV prevention and care. Stigmatizing beliefs can reduce willingness to test, disclose status, seek counselling or interact with people living with HIV. Therefore, awareness studies should include questions on attitude, not only knowledge. A person who knows routes of transmission but believes that people with HIV should be socially isolated still requires stigma-reduction education.

Table 2. Thematic synthesis of selected literature

Theme	Representative insight	Relevance to proposed study	Key sources
HIV awareness	Awareness must include correct knowledge, prevention, testing and rejection of myths.	Supports multidimensional awareness score.	WHO (2023); NACO (2023)
Indian HIV response	Community outreach and targeted communication remain important for prevention.	Supports localized assessment in Patna.	NACO (2023); Dandona et al. (2017)
Transport workers	Studies among auto-rickshaw drivers show knowledge gaps despite general awareness.	Supports the focus on rickshaw pullers as informal workers.	Giri et al. (2010)
Stigma	HIV stigma affects testing, disclosure and care-seeking.	Supports inclusion of attitude domain.	Nyblade et al. (2019); UNAIDS (2021)
Health education	Behaviour change requires repeated, accessible and context-specific IEC messages.	Supports practical intervention recommendations.	Park (2021); WHO (2023)

3.1 Research Gap

Existing literature provides broad evidence on HIV awareness and some evidence among transport workers, but there is limited localized documentation of AIDS awareness among rickshaw pullers in Patna during 2023. Many studies measure whether respondents have heard of AIDS, but fewer examine detailed knowledge of transmission, prevention, myths, testing awareness and stigma together. This proposed study addresses the gap by developing a structured cross-sectional design that can generate practical information for targeted health education among urban informal transport workers.

4. Research Methodology

4.1 Research Design

The proposed study will use a descriptive cross-sectional research design. It will assess AIDS awareness among rickshaw pullers in Patna during 2023 using a structured interview schedule. The design is suitable because it allows measurement of knowledge, attitude and awareness at a specific point in time. The study is observational and does not involve any clinical intervention. It is intended to generate public health information for awareness planning and health education.

4.2 Study Setting and Population

The proposed setting includes major rickshaw stands, railway station areas, bus stands, market zones, hospital surroundings and selected urban localities in Patna. The target population includes adult rickshaw pullers working in Patna during the study period. Respondents will be approached at work locations after obtaining permission where required. The study will include only those who provide informed consent and are willing to participate in a confidential interview.

4.3 Sample Size and Sampling Procedure

A proposed sample of 200 rickshaw pullers may be selected for the study. A multistage or purposive sampling

approach can be used by first identifying major rickshaw congregation points and then selecting eligible participants from each location. The final sampling method should depend on field feasibility and ethical approval. To reduce selection bias, interviews should be conducted at different times of the day and across different areas of Patna.

4.4 Inclusion and Exclusion Criteria

Table 3. Eligibility criteria for participant selection

Inclusion criteria	Exclusion criteria
Adult rickshaw pullers aged 18 years and above working in Patna during 2023.	Participants unwilling to provide informed consent.
Individuals engaged in rickshaw pulling for at least three months in Patna.	Individuals unable to complete the interview due to severe illness or communication difficulty.
Respondents available at selected rickshaw stands or work locations during data collection.	Temporary visitors not regularly working as rickshaw pullers in Patna.
Participants willing to answer questions confidentially.	Duplicate participation by the same respondent.

4.5 Data Collection Tool

Data will be collected using a structured interview schedule. The tool will include sections on socio-demographic profile, occupational characteristics, sources of information, knowledge of HIV/AIDS, transmission routes, prevention methods, myths and misconceptions, testing awareness, treatment awareness and attitude toward people living with HIV. Because literacy levels may vary, interviewer-administered questions will be more suitable than self-administered questionnaires.

4.6 Variables of the Study

Table 4. Variables and measurement domains

Variable category	Variables	Measurement approach
Socio-demographic variables	Age, education, marital status, residence, migration status and income category.	Structured background questions.
Occupational variables	Years of rickshaw pulling, daily working hours, usual work location and peer contact.	Self-reported occupational profile.
Awareness variables	Meaning of AIDS, HIV causation, transmission and prevention.	Correct/incorrect/don't know responses.
Service awareness	Knowledge of HIV testing centres, counselling, condom availability and treatment.	Awareness and referral-related questions.
Attitude variables	Stigma, willingness to interact, willingness to test and help-seeking attitude.	Likert-type or yes/no responses.

4.7 Scoring and Data Analysis Plan

Each correct knowledge response may be assigned one score and incorrect or don't know responses may be assigned zero. A total AIDS awareness score can be developed by summing responses across knowledge domains. Based on score distribution, awareness may be categorized as poor, moderate or good. Attitude questions may be analysed separately to identify stigma-related responses. Descriptive statistics will summarize frequencies, percentages, mean scores and category-wise distribution.

Associations between awareness level and background variables such as age, education, years of work, media exposure and previous health education may be assessed using chi-square test or Fisher exact test for categorical variables. If data quality permits, logistic regression may be used to identify predictors of good awareness. All statistical analysis must be performed only after actual field data collection and data cleaning.

4.8 Ethical Considerations

The study must obtain approval from an institutional ethics committee before data collection. Participation should be voluntary and based on informed consent. No participant should be forced to answer sensitive questions. Names and personal identifiers should not be recorded in the final dataset. Respondents should be informed that the study is for public health research and that refusal will not affect any service. After the interview, participants may be provided brief counselling information and referral details for HIV testing and counselling services if they request support.

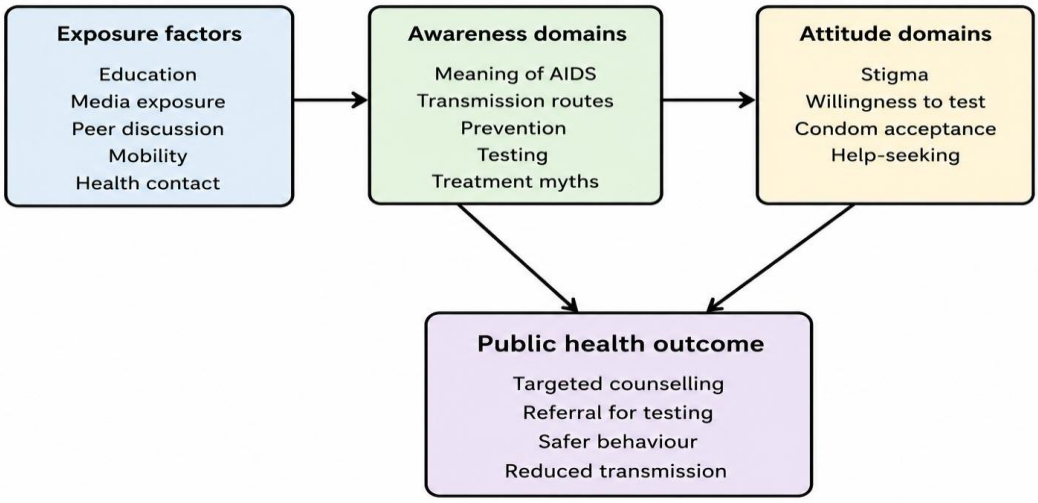


Figure 2. Analytical framework for awareness, attitude and intervention planning.

5. Analytical Indicators for Awareness Assessment

Although the final results should be calculated only from real collected data, the following indicators can help organize analysis and interpretation for the proposed study.

Overall AIDS Awareness Rate (%) = (Number of respondents with adequate awareness / Total respondents analysed) x 100

Correct Transmission Knowledge Rate (%) = (Number of respondents correctly identifying major transmission routes / Total respondents analysed) x 100

Misconception Rate (%) = (Number of respondents reporting at least one major misconception / Total respondents analysed) x 100

Testing Awareness Rate (%) = (Number of respondents aware of HIV testing/counselling services / Total respondents analysed) x 100

Non-Stigmatizing Attitude Rate (%) = (Number of respondents showing non-discriminatory attitude / Total respondents analysed) x 100

Table 5. Formula-based interpretation for AIDS awareness assessment

Indicator	Question answered	Public health implication
Overall awareness rate	How many respondents have adequate AIDS awareness?	Low rate indicates need for broad awareness campaigns.
Transmission knowledge rate	Do respondents correctly know how HIV is transmitted?	Low rate indicates need for focused educational messages.

Misconception rate	How common are false beliefs about HIV/AIDS?	High rate indicates need for myth-correction counselling.
Testing awareness rate	Do respondents know where to seek HIV testing or counselling?	Low rate indicates need for referral information at worker locations.
Non-stigmatizing attitude rate	Are respondents willing to interact without discrimination?	Low rate indicates need for stigma-reduction education.

6. Expected Findings and Interpretation Plan

As this document is a sample academic manuscript/protocol, no real findings are reported. After actual data collection, the study may identify varying levels of AIDS awareness among rickshaw pullers in Patna. Some respondents may have heard about AIDS but may not correctly identify all major routes of HIV transmission. Others may know about sexual transmission but may have limited knowledge about blood transmission, needle sharing, parent-to-child transmission or availability of testing services.

The study may also reveal the persistence of misconceptions. Common myths in community settings may include incorrect beliefs about transmission through casual contact, sharing food, mosquito bites or touching. Such misconceptions are important because they contribute to stigma and discrimination. Interpretation should therefore distinguish between general awareness and scientifically correct knowledge.

The findings may show that education level, media exposure, previous contact with health programmes and younger age are associated with higher awareness. However, these relationships must be tested statistically only after real data collection. If low testing awareness is observed, the study would support the need for mobile counselling, stand-based health education and referral linkages with integrated counselling and testing services.

7. Discussion

The proposed study is important because it focuses on a specific urban informal worker group that may not be adequately reached by conventional health education systems. Rickshaw pullers are visible in urban transport networks but may remain invisible in structured workplace health programmes because they are self-employed or informally employed. This creates a public health opportunity: awareness interventions can be delivered at rickshaw stands, parking points, railway stations and markets where workers are already present.

AIDS awareness should be understood as a layered construct. At the first level, respondents may know the name AIDS. At the second level, they may understand that HIV is transmitted through specific routes. At the third level, they may know how to prevent transmission and where to seek testing. At the fourth level, they may reject stigma and support treatment-seeking. Public health success requires progress across all levels. Therefore, this study uses a multidimensional awareness approach.

The study also has practical limitations. A cross-sectional design cannot prove causal relationships. Self-reported responses may be affected by social desirability bias, embarrassment or fear. Some respondents may give answers they believe are expected by the interviewer. The sample may not represent all rickshaw pullers in Patna if certain locations or work shifts are missed. Despite these limitations, the study can provide a useful foundation for localized health education planning.

8. Findings / Expected Contributions

- The study will help estimate the level of AIDS awareness among rickshaw pullers in Patna during 2023.
- It will identify gaps in knowledge related to HIV transmission, prevention, testing and treatment awareness.
- It will document common myths and misconceptions that may contribute to stigma.
- It will highlight the role of education, media exposure and occupational context in shaping awareness.
- It will support development of targeted awareness materials for informal transport workers.
- It will provide a base for future intervention studies and community outreach programmes in Patna.

9. Recommendations

- Public health agencies should conduct targeted AIDS awareness sessions at rickshaw stands, railway station areas, bus stands and market locations in Patna.
- Health education messages should clearly explain HIV transmission, prevention, testing and treatment in simple local language.
- IEC materials should focus on correcting myths related to casual contact, mosquito bites, sharing food and social interaction.
- Counselling and testing referral information should be made easily available to informal workers.
- Peer educators may be selected from among rickshaw pullers to improve trust and communication.
- Future studies should include larger samples, comparison with other informal worker groups and evaluation of intervention effectiveness.

10. Conclusion

The study of AIDS awareness among rickshaw pullers in Patna during 2023 is significant because it addresses a public health issue within a socially and economically vulnerable occupational group. HIV prevention depends not only on availability of services but also on correct knowledge, reduced stigma and willingness to seek testing and counselling. Rickshaw pullers may face barriers such as low education, long working hours, irregular income and limited access to formal health communication, making targeted awareness essential.

The proposed study provides a structured framework for assessing AIDS awareness through knowledge of transmission, prevention, misconceptions, testing awareness and attitude toward people living with HIV. If implemented with ethics approval and real data collection, the study can help identify practical knowledge gaps and guide localized health education strategies in Patna. Ultimately, the purpose of the study is to support informed, non-stigmatizing and accessible HIV prevention among urban informal workers.

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