International Journal of Medical and Pharmaceutical Research

Online ISSN-2958-3683 | Print ISSN-2958-3675
Frequency: Bi-Monthly
Available online on: https://ijmpr.in/

Original Article

Patient Satisfaction and Service Quality Assessment of ART Centre

Dr Maharshi Narayan Ojha[1], Dr.Raghvendra Gumashta[2], Dr.Ria Sarkar[3], Dr Ravi Prakash Rathaur[4]

[1]Post Graduate Resident , Department of Community Medicine People's College of Medical Sciences and Research centre, People's University Bhopal, Madhya Pradesh
[2]Professor and Head, Department of Community Medicine, Mansarovar Medical College and MGU Hospital, Gadiya, Sehore, Madhya Pradesh
[3]Assistant Professor, Department of Community Medicine, People's college of Medical Sciences and Research centre. People's University, Bhopal,Madhya Pradesh
[4]Post Graduate Resident, Department of Community Medicine, People's College of Medical Sciences and Research Centre, People's University, Bhopal, Madhya Pradesh

Corresponding Author:

Dr Maharshi Narayan Ojha
Post Graduate Resident , Department of Community Medicine People's College of Medical Sciences and Research centre, People's University Bhopal, Madhya Pradesh

Received: 15-03-2026
Accepted: 17-04-2026
Available online: 30-04-2026

ABSTRACT

Background: Patient satisfaction is an important indicator of healthcare quality and plays a crucial role in improving treatment adherence, retention in care, and clinical outcomes among People Living with HIV/AIDS (PLHIV). Assessing patient satisfaction and service quality at Antiretroviral Therapy (ART) Centres can help identify strengths and areas requiring improvement in HIV care delivery.
Objective: To assess patient satisfaction and evaluate the quality of services provided at an ART Centre of Bhopal, Madhya Pradesh.
Materials and Methods: A hospital-based cross-sectional study was conducted among 384 HIV-positive patients attending an ART Centre of Bhopal. Participants aged 18 years and above who had been receiving ART for at least six months were enrolled using consecutive sampling. Data were collected using a pre-designed, pre-tested structured questionnaire administered through face-to-face interviews. Patient satisfaction was assessed using a five-point Likert scale, and service quality was evaluated across the domains of tangibility, reliability, responsiveness, assurance, and empathy. Data were analysed using SPSS version 26.0.
Results: The mean overall Patient Satisfaction Questionnaire (PSQ) score was 4.18 ± 0.56, indicating a high level of satisfaction. The highest satisfaction scores were observed for availability of ART medications (4.56 ± 0.43), interpersonal manner of staff (4.38 ± 0.49), and counselling services (4.34 ± 0.52). Communication with healthcare providers (4.26 ± 0.57) and privacy and confidentiality (4.22 ± 0.60) were also highly rated. Comparatively lower satisfaction scores were reported for waiting time (3.71 ± 0.81) and accessibility of services (3.89 ± 0.72).
Conclusion: Patients attending the ART Centre reported a high level of satisfaction with the quality of services provided. Strengthening service accessibility and reducing waiting times may further enhance patient experiences and improve the overall quality of HIV care delivery.

Keywords*: Patient Satisfaction; Antiretroviral Therapy Centre; HIV/AIDS; Service Quality; People Living with HIV; Healthcare Delivery.*

INTRODUCTION

Human Immunodeficiency Virus (HIV) infection remains one of the most significant public health challenges worldwide. The introduction of antiretroviral therapy (ART) has dramatically improved the survival and quality of life of people living with HIV (PLHIV), transforming HIV infection from a fatal disease into a chronic, manageable condition. However, the effectiveness of ART programmes depends not only on the availability of medications but also on the quality of healthcare services and the satisfaction of patients receiving them.[1,2]

Patient satisfaction is recognised as an important indicator of healthcare quality, reflecting the extent to which healthcare services meet patients' expectations and needs. In chronic diseases such as HIV infection, patient satisfaction assumes greater importance because treatment requires lifelong adherence, regular follow-up visits, counselling, and continuous interaction with healthcare providers. Satisfied patients are more likely to maintain adherence to ART, remain engaged in care, and achieve better treatment outcomes.[3,4]

ART centres provide a wide range of services, including drug dispensing, clinical evaluation, laboratory monitoring, adherence counselling, psychosocial support, and management of opportunistic infections. The quality of these services can significantly influence patients' experiences and perceptions of care. Factors such as accessibility of services, waiting time, confidentiality, provider–patient communication, staff attitude, availability of medications, and counselling quality have been shown to affect patient satisfaction in HIV care settings.[5,6]

Several studies have demonstrated a positive association between patient satisfaction and retention in HIV care. Improved satisfaction levels contribute to better treatment adherence, increased trust in healthcare providers, and reduced loss to follow-up. Conversely, poor service quality may discourage healthcare utilisation and negatively affect clinical outcomes.[4,7] As healthcare systems increasingly emphasise patient-centred care, regular assessment of service quality and patient satisfaction has become an essential component of programme evaluation and quality improvement initiatives.

Therefore, evaluating patient satisfaction and service quality at ART centres is crucial for identifying gaps in service delivery and developing strategies to enhance the effectiveness, accessibility, and responsiveness of HIV care services. Such assessments can provide valuable evidence for strengthening ART programmes and improving the overall healthcare experience of people living with HIV.

MATERIALS AND METHODS

Study Design and Setting

A hospital-based cross-sectional study was conducted at the Antiretroviral Therapy (ART) Centre located in Bhopal, Madhya Pradesh. The ART Centre provides comprehensive HIV care services including antiretroviral therapy, adherence counselling, laboratory monitoring, clinical evaluation, and follow-up care for People Living with HIV/AIDS (PLHIV).

Ethical Considerations

The study was conducted after obtaining approval from the Institutional Ethics Committee. Written informed consent was obtained from all participants before enrolment in the study. Participation was voluntary, and confidentiality and anonymity of the collected information were maintained throughout the study.

Study Population and Sampling

The study included HIV-positive patients aged 18 years and above who had been receiving antiretroviral therapy for at least six months and attended the ART Centre during the study period. Patients who were critically ill, unable to communicate effectively, or unwilling to participate were excluded from the study.

The sample size was calculated using the formula $n = Z^2pq/d^2$, where p represented the expected prevalence of patient satisfaction reported in previous studies. Based on the calculation, a total of 384 participants were required. Eligible participants were recruited consecutively until the desired sample size was achieved.

Data Collection Tool and Procedure

Data were collected using a pre-designed, pre-tested structured questionnaire administered through face-to-face interviews. The questionnaire consisted of socio-demographic and clinical details, along with items assessing patient satisfaction and service quality. Patient satisfaction was measured using a five-point Likert scale ranging from 1 (very dissatisfied) to 5 (very satisfied). The questionnaire assessed multiple domains including accessibility of services, waiting time, availability of antiretroviral medications, counselling services, communication with healthcare providers, staff behaviour, privacy and confidentiality, laboratory services, facility cleanliness, and overall satisfaction with services received at the ART Centre.

Service quality was assessed using five dimensions adapted from the SERVQUAL model, namely tangibility, reliability, responsiveness, assurance, and empathy. For each participant, domain-wise satisfaction scores and an overall patient satisfaction score were calculated by averaging the responses across the respective items. Higher scores indicated greater levels of satisfaction and perceived service quality.

Outcome Measures

The primary outcome measure was the overall patient satisfaction score among ART Centre attendees. Secondary outcomes included domain-specific patient satisfaction scores, perceived service quality scores, and the association of socio-demographic and clinical characteristics with overall patient satisfaction.

Statistical Analysis

Data were entered into Microsoft Excel and analysed using Statistical Package for Social Sciences (SPSS) version 26.0. Descriptive statistics were used to summarise the data. Continuous variables were expressed as mean ± standard deviation, while categorical variables were presented as frequencies and percentages. Mean Patient Satisfaction Questionnaire (PSQ) scores were calculated for individual domains as well as for overall satisfaction. Associations between overall satisfaction scores and selected socio-demographic and clinical variables were assessed using the chi-square test after categorising satisfaction levels. A p-value of less than 0.05 was considered statistically significant.

RESULTS

A total of 384 patients receiving ART services participated in the study. The mean age of the participants was 39.8 ± 10.7 years, and 57.0% were males. The overall mean Patient Satisfaction Questionnaire (PSQ) score was 4.18 ± 0.56 on a five-point scale, indicating a high level of satisfaction with ART Centre services. Higher scores were observed for interpersonal manner, counselling services, and technical quality, whereas accessibility and waiting time received comparatively lower scores.

Table 1. Socio-demographic and Clinical Characteristics of Participants

Variable	n (%)
Age 18–30 years	82 (21.4)
Age 31–40 years	118 (30.7)
Age 41–50 years	106 (27.6)
Age >50 years	78 (20.3)
Male	219 (57.0)
Female	159 (41.4)
Transgender	6 (1.6)
Urban Residence	227 (59.1)
Rural Residence	157 (40.9)
Duration of ART >5 years	209 (54.4)
Secondary Education or Above	235 (61.2)

Most participants were aged 31–50 years, male, and had been receiving ART for more than five years.

Table 2. Mean Patient Satisfaction Questionnaire (PSQ) Scores Across Service Domains

Domain	Mean	Satisfaction Level
General Satisfaction	4.21 ± 0.61	High
Technical Quality of Care	4.29 ± 0.54	High
Interpersonal Manner of Staff	4.38 ± 0.49	Very High
Communication with Healthcare Providers	4.26 ± 0.57	High
Counselling Services	4.34 ± 0.52	Very High
Privacy and Confidentiality	4.22 ± 0.60	High
Accessibility and Convenience	3.89 ± 0.72	Moderate–High
Waiting Time	3.71 ± 0.81	Moderate
Availability of ART Medication	4.56 ± 0.43	Very High
Overall PSQ Score	4.18 ± 0.56	High

The highest mean satisfaction scores were observed for availability of ART medications (4.56 ± 0.43), interpersonal manner of staff (4.38 ± 0.49), and counselling services (4.34 ± 0.52). The lowest score was reported for waiting time (3.71 ± 0.81). The overall PSQ score of 4.18 ± 0.56 indicates a high level of patient satisfaction with ART Centre services.

The findings revealed a high overall level of patient satisfaction among ART Centre attendees. Patients reported excellent satisfaction with medication availability, staff behaviour, counselling services, and communication with healthcare providers. However, waiting time and accessibility of services received relatively lower ratings, suggesting areas for improvement. Overall, the ART Centre demonstrated good service quality and patient-centred care.

DISCUSSION

The present study assessed patient satisfaction and perceived service quality among People Living with HIV/AIDS attending the ART Centre. The findings revealed a high overall level of patient satisfaction, with a mean Patient Satisfaction Questionnaire (PSQ) score of 4.18 ± 0.56, indicating that the majority of participants were satisfied with the healthcare services provided. These findings suggest that the ART Centre is effectively delivering patient-centred HIV care and maintaining satisfactory standards of service delivery.

The highest satisfaction score in the present study was observed for the availability of ART medications (4.56 ± 0.43). Continuous availability of antiretroviral drugs is essential for ensuring treatment adherence and preventing treatment interruptions. Similar findings were reported by Nikitha et al., who observed high satisfaction among ART beneficiaries regarding medication availability and emphasised its importance in maintaining continuity of care.[10] Adequate drug supply strengthens patient confidence in healthcare services and contributes to long-term treatment compliance.

High satisfaction scores were also observed for the interpersonal manner of staff (4.38 ± 0.49) and counselling services (4.34 ± 0.52). These findings indicate that participants perceived healthcare providers as supportive, respectful, and approachable. Counselling services are a crucial component of HIV care as they enhance treatment adherence, address psychosocial concerns, and improve understanding of disease management. Similar observations were reported by Vahab et al., who found that courteous staff behaviour and effective counselling significantly influenced patient satisfaction among PLHIV attending an HIV clinic in southern India.[12] Sood et al. also reported that positive interactions with healthcare personnel contributed substantially to overall satisfaction among patients attending ART centres.[9]

The domains of communication with healthcare providers (4.26 ± 0.57) and privacy and confidentiality (4.22 ± 0.60) received high satisfaction scores in the present study. Effective communication promotes patient trust, improves understanding of treatment plans, and encourages long-term engagement in care. Confidentiality is particularly important in HIV care because stigma and discrimination continue to affect many individuals living with HIV. Dang et al. identified provider communication and patient-provider relationships as major determinants of overall satisfaction among HIV patients receiving care.[11] Similarly, Beach et al. demonstrated that a strong patient-provider relationship was associated with improved adherence to treatment and better health outcomes among HIV-positive individuals.[16]

The mean score for technical quality of care (4.29 ± 0.54) indicated a high level of confidence in the competence and professionalism of healthcare providers. Patients receiving lifelong ART frequently interact with healthcare personnel, making trust in clinical expertise an important aspect of satisfaction. The findings of the present study support previous evidence suggesting that perceived technical competence positively influences healthcare experiences and patient retention in HIV care programmes.[11,16]

Among all domains, the lowest satisfaction score was observed for waiting time (3.71 ± 0.81), followed by accessibility and convenience of services (3.89 ± 0.72). Although these scores remained within the satisfactory range, they were lower than those observed for other service domains. Increased patient load, limited manpower, and administrative procedures may contribute to prolonged waiting times in ART clinics. Similar findings were reported by Wanyenze et al., who observed that delays in service delivery and clinic congestion adversely affected patient experiences in HIV treatment facilities.[14] Long waiting periods have consistently been identified as one of the common causes of dissatisfaction in healthcare settings and represent an important area for quality improvement.

The overall high satisfaction score observed in the present study is consistent with findings reported from ART centres in different regions of India. Sood et al. reported high satisfaction among patients attending an ART centre in North-West India, particularly with healthcare provider behaviour and quality of services.[9] Likewise, Nikitha et al. observed favourable satisfaction levels across multiple service domains, highlighting the effectiveness of structured ART service delivery systems.[10] These similarities suggest that standardized ART services implemented under the national HIV programme have contributed to improving patient experiences across different healthcare settings.

Patient satisfaction is increasingly recognised as an important indicator of healthcare quality. Batbaatar et al., in their systematic review, concluded that factors such as provider communication, accessibility, responsiveness, and interpersonal behaviour significantly influence patient satisfaction across healthcare settings.[13] The findings of the present study support these observations, as domains related to communication, counselling, staff behaviour, and medication availability demonstrated the highest satisfaction scores.

Overall, the results indicate that the ART Centre provides satisfactory and patient-centred services to PLHIV. High levels of satisfaction were observed with medication availability, counselling services, healthcare provider communication, and staff behaviour. However, improvements in waiting time and accessibility may further enhance patient experiences and service quality. Regular assessment of patient satisfaction can help identify service gaps and support continuous quality improvement initiatives to strengthen HIV care delivery.

CONCLUSION

The present study demonstrated a high level of patient satisfaction with the services provided at the ART Centre, with an overall mean PSQ score indicating positive perceptions of care among People Living with HIV/AIDS. The highest satisfaction levels were observed for availability of antiretroviral medications, counselling services, staff behaviour, and communication with healthcare providers, reflecting the effectiveness of the ART programme in delivering patient-centred care. However, comparatively lower scores for waiting time and accessibility of services suggest areas that require further improvement. Regular assessment of patient satisfaction and service quality can help identify gaps in healthcare delivery and support continuous quality improvement initiatives, ultimately enhancing treatment adherence, patient retention, and overall quality of HIV care.

REFERENCES

1. Ford N, Ball A, Baggaley R, Vitoria M, Low-Beer D, Penazzato M, Vojnov L, Bertagnolio S, Habiyambere V, Doherty M, Hirnschall G. The WHO public health approach to HIV treatment and care: looking back and looking ahead. Lancet Infect Dis. 2018 Mar;18(3):e76-e86. doi: 10.1016/S1473-3099(17)30482-6. Epub 2017 Oct 20. PMID: 29066132.
2. De Cock KM, El-Sadr WM. When to start ART in Africa--an urgent research priority. N Engl J Med. 2013 Mar 7;368(10):886-9. doi: 10.1056/NEJMp1300458. Epub 2013 Feb 20. PMID: 23425131; PMCID: PMC4825816.
3. Batbaatar E, Dorjdagva J, Luvsannyam A, Savino MM, Amenta P. Determinants of patient satisfaction: a systematic review. Perspect Public Health. 2017 Mar;137(2):89-101. doi: 10.1177/1757913916634136. Epub 2016 Jul 20. PMID: 27004489.
4. Dang BN, Westbrook RA, Black WC, Rodriguez-Barradas MC, Giordano TP. Examining the link between patient satisfaction and adherence to HIV care: a structural equation model. PLoS One. 2013;8(1):e54729. doi: 10.1371/journal.pone.0054729. Epub 2013 Jan 30. PMID: 23382948; PMCID: PMC3559888.
5. Nikitha OS, Sushant MK. Client Satisfaction of Antiretroviral Therapy Service Delivery: A Cross-Sectional Study at an Antiretroviral Therapy Center. Int J Appl Basic Med Res. 2021 Jan-Mar;11(1):14-20. doi: 10.4103/ijabmr.IJABMR_46_20. Epub 2021 Jan 26. PMID: 33842290; PMCID: PMC8025958.
6. Vahab SA, Madi D, Ramapuram J, Bhaskaran U, Achappa B. Level of Satisfaction Among People Living with HIV (PLHIV) Attending the HIV Clinic of Tertiary Care Center in Southern India. J Clin Diagn Res. 2016 Apr;10(4):OC08-10. doi: 10.7860/JCDR/2016/19100.7557. Epub 2016 Apr 1. PMID: 27190859; PMCID: PMC4866157.
7. Sood A, Mazta S, Sharma A, Bhardwaj A, Raina SK, Chander V. Scoring satisfaction among patients, attending ART Centre of a medical college in North-West India. AIDS Care. 2013;25(12):1477-80. doi: 10.1080/09540121.2013.774313. Epub 2013 Feb 27. PMID: 23445406.
8. Kumari R, Idris MZ, Bhushan V, Khanna A, Agarwal M, Singh SK. Study on patient satisfaction in the government allopathic health facilities of Lucknow district, India. Indian J Community Med. 2009;34(1):35-42.
9. Sood A, Mazta SR, Sharma A, Bhardwaj A, Raina SK, Chander V. Scoring satisfaction among patients attending ART centre of a medical college in North-West India. AIDS Care. 2013;25(12):1477-1480.
10. Nikitha OS, Reddy KVS, Prasad SVV, Rao GN. Client satisfaction of antiretroviral therapy service delivery: a cross-sectional study at an antiretroviral therapy center. Int J Appl Basic Med Res. 2021;11(1):14-20.
11. Dang BN, Westbrook RA, Rodriguez-Barradas MC, Giordano TP. Identifying drivers of overall satisfaction in patients receiving HIV primary care: a cross-sectional study. PLoS One. 2012;7(8):e42980.
12. Vahab SA, Madi D, Ramapuram JT, Achappa B, Unnikrishnan B, Rao S. Level of satisfaction among people living with HIV attending the HIV clinic of a tertiary care centre in southern India. J Clin Diagn Res. 2016;10(4):OC08-OC11.
13. Batbaatar E, Dorjdagva J, Luvsannyam A, Savino MM, Amenta P. Determinants of patient satisfaction: a systematic review. Perspect Public Health. 2017;137(2):89-101.
14. Wanyenze RK, Wagner GJ, Alamo S, Amanyire G, Ouma J, Kwarisiima D, et al. Evaluation of the efficiency of patient flow at three HIV clinics in Uganda. AIDS Patient Care STDS. 2010;24(7):441-446.
15. Ford N, Ball A, Baggaley R, Vitoria M, Low-Beer D, Penazzato M, et al. The WHO public health approach to HIV treatment and care: looking back and looking ahead. Lancet Infect Dis. 2018;18(3):e76-e86.
16. Beach MC, Keruly J, Moore RD. Is the quality of the patient-provider relationship associated with better adherence and health outcomes for patients with HIV? J Gen Intern Med. 2006;21(6):661-665.