

EVALUATING THE PERCEPTION OF ACCESSIBILITY AND PATIENT SATISFACTION THROUGH TELEMEDICINE AT SANKARA VISION CENTRES

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Master of Business Administration (MBA)

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by

P. Nivetha

Under the Supervision and Guidance of

Dr. Susmit Jain

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Through Telemedicine At Sankara Vision Centres

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She comes across as a committed, sincere & diligent person who has a strong drive and zeal for learning

We wish her all the best for future endeavours


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This is to certify that dissertation titled “**Evaluating the Perception of Accessibility and Patient Satisfaction Through Telemedicine at Sankara Vision Centres**” is a record of the research work undertaken by **P. Nivetha** in partial fulfillment of the requirements for the award of the degree of MBA (Hospital and Health Management) from the IIHMR University, Jaipur under my guidance and supervision and her approach to the research study has been sincere, scientific, and analytical.

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DECLARATION BY STUDENT

I hereby declare that this dissertation titled "*Evaluating the Perception of Accessibility and Patient Satisfaction Through Telemedicine at Sankara Vision Centres*" is the bonafide record of my original research work. I declare that it has not been submitted to any other university or institution for the award of any degree or diploma. Information derived from the published or unpublished work of others has been duly acknowledged in the text.



Name: P. Nivetha

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SANKARA EYE FOUNDATION



Evaluating the Perception of Accessibility and Patient Satisfaction Through Telemedicine at Sankara Vision Centres.

ABSTRACT

Submitted by: P. Nivetha

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Title : Evaluating the Perception of Accessibility and Patient Satisfaction Through Telemedicine at Sankara Vision Centres.

This study explores patient satisfaction within community-based eye care services, focusing specifically on the effectiveness of teleophthalmology consultations in Vision Centres operated by the Sankara Eye Foundation across Tamil Nadu, India. As telemedicine becomes increasingly integral to healthcare delivery, understanding its influence on patient experience is essential for improving service quality and reach. The primary objective of this research was to evaluate the association between key service indicators—such as accessibility, service efficiency, doctor–patient interaction, environmental comfort—and patient satisfaction among users of video consultations (VC) and non-video consultations (non-VC).

This study adopted a cross-sectional descriptive research design, conducted over a period of three months from 4th April to 5th June 2025. A total of 300 adult participants were enrolled from eight Vision Centres: five from the Coimbatore Unit (Annur, Perur, Sathyamangalam, Karamadai, Pappampatti) and three from the Krishnakoil Unit (Aruppukottai, Rajapalayam, Sivakasi). Of these, 255 patients (85%) received video-based teleconsultations, while 45 (15%) availed only in-person care. Data collection was carried out using structured questionnaires, with 206 interviews conducted face-to-face and 94 via telephone. Convenience sampling was adopted for participant selection, and verbal informed consent was obtained from all individuals prior to participation. The data were analysed using descriptive statistics and Chi-square tests to examine associations between service-related factors and overall patient satisfaction.

Results showed that participants who received video consultations reported significantly higher satisfaction levels. Key dimensions of satisfaction included the doctor's understanding of their eye condition ($p < 0.001$), clarity of the explanation provided ($p < 0.001$), and comfort during the consultation ($p < 0.001$). Furthermore, waiting time before the teleconsultation was a statistically significant factor influencing satisfaction ($p = 0.0029$), along with travel time to the vision centre ($p = 0.0316$). These findings highlight the enhanced service experience associated with video-based teleconsultation in eye care delivery within semi-urban and rural settings.

Comparative analysis between the VC and non-VC groups highlighted the added value of structured teleconsultation systems. The findings suggest that integrating video-based consultations into routine vision care can enhance both access and quality. A unit-wise comparison indicated that Krishnakoil patients were more satisfied with staff behaviour, whereas affordability was rated better in Coimbatore. However, both units reported low satisfaction with direct interaction with doctors, pointing to a need for more personalised communication during teleconsultations.

Based on the findings, several recommendations were proposed. These include reinforcing doctor–patient interactions with empathetic and reassuring communication, ensuring the availability of optometrists during outreach activities, and upgrading the visibility of Vision Centres through improved signage and iconography. These measures aim to strengthen the continuity and perception of care, particularly in rural and semi-urban settings.

The study’s strengths include a real-world implementation setting, adequate sample size, and a dual-mode data collection strategy. However, limitations include the exclusion of caretaker or paediatric perspectives, restriction to only eight out of eighteen centres due to project timelines, and reliance solely on structured questionnaires, which may not capture deeper patient insights.

In conclusion, teleophthalmology demonstrates strong potential in enhancing patient satisfaction in community eye care settings. When implemented with supporting infrastructure and communication strategies, video consultations can bridge existing service gaps and support scalable, patient-centric care delivery.

Keywords: Teleophthalmology, Patient Satisfaction, Vision Centres, Video Consultation, Rural Eye Care

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Lastly, I extend my heartfelt appreciation to my family and close friends, whose unwavering support, love, and belief in my abilities gave me the strength to navigate challenges and complete this journey.

While every effort has been made to ensure the accuracy and integrity of this dissertation, any remaining errors or oversights are solely my responsibility. I sincerely hope this work contributes meaningfully to the field and serves as a solid foundation for future research and impactful community health interventions.

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ABBREVIATIONS

Abbreviation	Full form
VC	Video Consultation
Non-VC	Non-Video Consultation
SEF	Sankara Eye Foundation
SPSS	Statistical Package for the Social Sciences
%	Percentage
n/N	Sample Size / Number of Participants
p - value	Probability Value (used for statistical significance)
VC Users	Participants who used Video Consultation
Non-VC Users	Participants who did not use Video Consultation
NA	Not Applicable

CHAPTER 1- INTRODUCTION

The ability to access timely, affordable, and expert healthcare remains a fundamental requirement of a fair and effective health system. In an era of advancing digital innovation, telemedicine has emerged as a powerful tool in bridging the gap between patients and specialists, particularly in areas where physical infrastructure and clinical personnel are limited. Within ophthalmology, teleconsultation has proven especially effective in enabling early diagnosis, prompt intervention, and continuity of care factors that are essential in preventing avoidable vision loss and improving eye health at the community level. Embracing this model, the Sankara Eye Foundation has developed a structured teleophthalmology network aimed at making quality eye care accessible to all segments of society, regardless of location or socioeconomic background.

Currently, the Foundation operates 40 Vision Centres across India, with 18 of these located in Tamil Nadu, primarily serving semi-urban and rural regions. These Vision Centres function as primary access points for eye care, where every patient receives a preliminary evaluation and is connected in real time with an ophthalmologist at a base hospital through virtual consultation. This model not only reduces the need for long-distance travel but also ensures that each patient receives consistent specialist input during their visit. It represents a scalable, community-based solution to the ongoing challenge of reaching patients with specialist care.

This study is designed to explore how patients perceive the accessibility, effectiveness, and quality of telemedicine services provided through these Vision Centres, with a particular focus on their satisfaction with the overall experience. While the digital and clinical infrastructure is firmly in place, there is a need to assess whether the services meet patients' expectations, whether they find the process convenient and understandable, and whether virtual consultations offer a level of interaction that patients consider satisfactory. Key considerations include the patient's comfort with virtual communication, trust in the diagnostic process, and perceived responsiveness of the care team.

The central issue addressed by this research is the lack of comprehensive data on patient perceptions in telemedicine-based eye care, especially within decentralized service delivery frameworks. This study is significant in its potential to inform improvements in care delivery by identifying patient-driven insights. By evaluating satisfaction and access-related experiences, the findings can support Sankara Eye Foundation in refining its systems, enhancing doctor-patient engagement, and strengthening its community-based vision care model.

The primary objective of the study is to assess the overall satisfaction of patients utilizing telemedicine services at Vision Centres. The secondary objectives are to evaluate patient-perceived accessibility and service efficiency, examine the quality of communication, physical environment, and provider responsiveness, and explore patient experiences and the perceived usefulness of teleconsultations in meeting their eye care needs. The findings of this research are intended to support Sankara Eye Foundation in enhancing its model of care, ensuring that technological innovation translates into meaningful patient outcomes.

CHAPTER 2- REVIEW OF LITERATURE

Author(s)	Year	Location	Title of Study	Key Features
Paul et al.	2006	Rural South India	Patient satisfaction levels in teleconsultation services in rural South India	Found that patient involvement (asking questions) during teleconsultation improved satisfaction levels.
Kovai et al.	2010	Andhra Pradesh, India	Patient satisfaction and perceptions of quality of care at vision centres in rural India	Better satisfaction in larger villages due to accessibility and staff behaviour.
Kovai et al.	2012	Rural India	Barriers to accessing eye care services among visually impaired populations in rural India	Identified staff behaviour, location, and accessibility as key drivers of satisfaction.
John et al.	2012	Rural India	The Sankara Nethralaya mobile teleophthalmology model for comprehensive eye care delivery in rural India	Demonstrated feasibility of a mobile teleophthalmology unit providing comprehensive eye care in rural Indian settings.
Kurji et al.	2013	Africa	Improving diabetic retinopathy screening through teleophthalmology in sub-Saharan Africa	Teleophthalmology improved access and early detection of diabetic retinopathy.
Tan et al.	2017	International (Systematic Review)	Real-time teleophthalmology versus face-to-face consultation: A systematic review	Compared real-time teleophthalmology with in-person consultations, showing similar clinical outcomes and patient satisfaction.

Host et al.	2018	Rural Western Australia	Real-time teleophthalmology video consultation: analysis of patient satisfaction in rural Western Australia	Reported high patient satisfaction with real-time video consultations in remote areas.
Khanna et al.	2020	India	Vision Centres: a viable primary eye care model for India	Vision Centre model shown as scalable and effective in blindness prevention and expanding access.
Lorato et al.	2020	Ethiopia	Determinants of patient satisfaction in ophthalmic care services in Ethiopia	Emphasized service quality and communication as major satisfaction drivers.
Valpuesta Martin et al.	2020	Castilla y León, Spain	Satisfaction with a teleophthalmology-based screening programme for diabetic retinopathy in rural Spain	High satisfaction among both patients and primary care professionals in a rural diabetic retinopathy screening programme.
Fatehi et al.	2020	Global (focus on elderly care)	Teleophthalmology for the elderly population: A review of the literature	Reviewed benefits and barriers of teleophthalmology for elderly patients, focusing on accessibility and usability.
Patel et al.	2021	United States	Patient satisfaction with tele-optometry during the COVID-19 pandemic in the US	Reported high satisfaction due to convenience and reduced wait times.

CHAPTER 3- METHODOLOGY

This chapter outlines the research methodology adopted to evaluate patient perception of accessibility and satisfaction with telemedicine services at Vision Centres operated by the Sankara Eye Foundation. The methodology includes the research question, hypotheses, design, setting, sampling methods, data collection tools, ethical considerations, and analytical techniques used in the study.

Research Question

The central research question for this study was: How do patients perceive the quality, accessibility, and overall effectiveness of eye care services delivered through telemedicine at Vision Centres operated by the Sankara Eye Foundation?

Hypotheses

- **Null Hypothesis (H_0):** Teleconsultation services at Vision Centres do not significantly influence patient satisfaction compared to services provided without video consultation.
- **Alternative Hypothesis (H_1):** Teleconsultation services at Vision Centres significantly enhance patient satisfaction, particularly in aspects such as communication with the doctor, clarity of diagnosis, perceived quality of care, and overall patient experience compared to non-video consultations.

Study Design

The study followed a descriptive cross-sectional design aimed at capturing real-time patient feedback at the point of service.

Setting

The total sample size was $n = 300$ patients, selected through Convenience Sampling to include those who had experienced video consultations and those who had not. The study population consisted of adult patients who visited the Vision Centres during the study period. The criteria for inclusion and exclusion were as follows:

Inclusion Criteria:

- Patients who received services at Vision Centres, whether through teleconsultation or in-person, and who provided verbal informed consent to participate were included in the study.

Exclusion Criteria:

- Patients under the age of 18
- Patients who were unwilling or unable to provide verbal consent
- Patients with incomplete or inconsistent responses

Out of the total, $n = 255$ patients underwent video consultations, and $n = 45$ patients did not. Data was collected directly through visits to the eight Vision Centres included in the study. These centres were:

1. Annur
2. Perur
3. Sathyamangalam
4. Karamadai
5. Papampatti
6. Aruppukottai
7. Rajapalayam
8. Sivakasi

Data Collection

During these field visits, $n = 206$ face-to-face interviews and $n = 94$ telephonic interviews were conducted using a structured Google Form. The form included an introductory section explaining the purpose of the study, and verbal consent was obtained before proceeding with the questionnaire.

Pilot Study

A pilot study was first conducted with 35 patients at two centres—Annur and Perur. Based on this pilot, the form was refined to add three additional questions:

1. How long does the patient wait for the teleconsultation?
2. If teleconsultation doesn't happen, what is the reason?

3. What is the specific reason for patient satisfaction (doctor consultation, staff behaviour, or service affordability)?

Analytical Approach

The study employed a quantitative approach to measure patient satisfaction and accessibility. The data collected included demographic information, travel distance, waiting time, comfort with virtual interaction, communication clarity, and perception of service affordability and overall satisfaction.

The data was organized and analysed using basic tools in Microsoft Excel. For deeper statistical analysis, SPSS Software was used, specifically for conducting Chi-square tests to determine the significance of categorical variables related to patient satisfaction and teleconsultation experiences. The Chi-square test helped assess whether there were statistically significant differences in satisfaction levels between patients who underwent teleconsultation and those who did not.

Operational Definitions

- **Teleconsultation** refers to the video-based interaction between patients at the Vision Centre and ophthalmologists based at the central hospital.
- **Satisfaction** refers to the extent to which patients felt their needs were met by the service.
- **Accessibility** refers to how easily patients were able to reach and utilize the Vision Centre services.

Ethical Considerations

All ethical protocols were followed. The respective department heads have thoroughly reviewed and discussed the ethical aspects related to the proposed dissertation topic. Based on their evaluation, they have confirmed the ethical appropriateness of the study and have granted approval to proceed with the research. Verbal informed consent was obtained from every participant. Participation was completely voluntary, and no personal identifiers were collected. The data was stored confidentially and used solely for the purpose of this study.

CHAPTER 4- RESULTS

A total of 300 adult participants were included in the study across eight Vision Centres operated by Sankara Eye Foundation in Tamil Nadu—Annur, Perur, Sathyamangalam, Karamadai, Pappampatti (Coimbatore Unit) and Aruppukottai, Rajapalayam, Sivakasi (Krishnakoil Unit) as shown in (Figure 4.1). Among them, 255 (85%) received video consultations, while 45 (15%) had only in-person care. Most participants were over 50 years old (as shown in Figure 4.2), with a fairly balanced gender distribution (52% female, 48% male, as shown in Figure 4.3). Data was collected via 206 face-to-face and 94 telephonic interviews, using convenience sampling with verbal consent. A structured questionnaire captured insights on accessibility, service efficiency, interaction quality, environmental comfort, and overall satisfaction. This chapter includes both descriptive and comparative analysis between the two groups to identify key satisfaction factors.

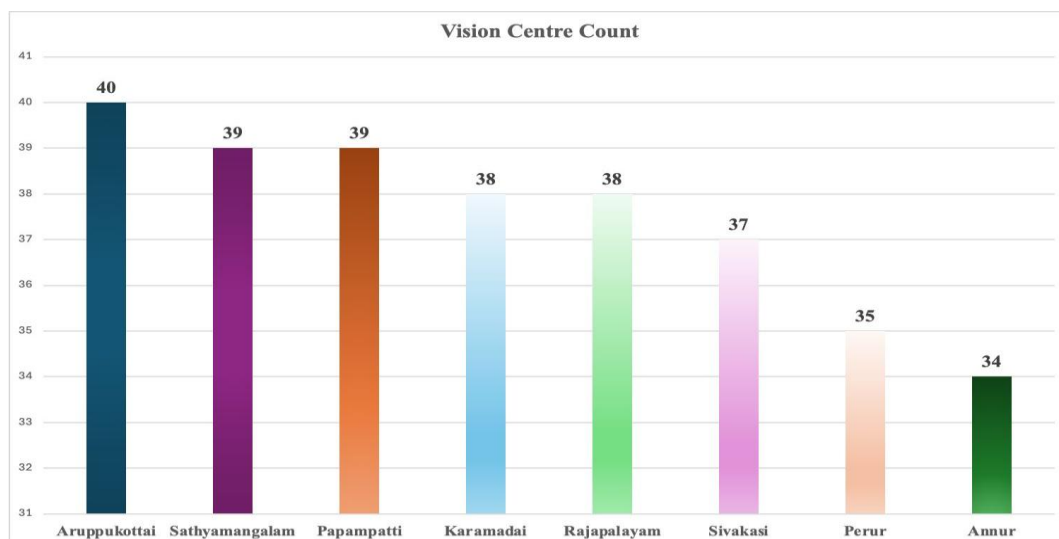


FIGURE 4.1: DISTRIBUTION OF VISION CENTRES

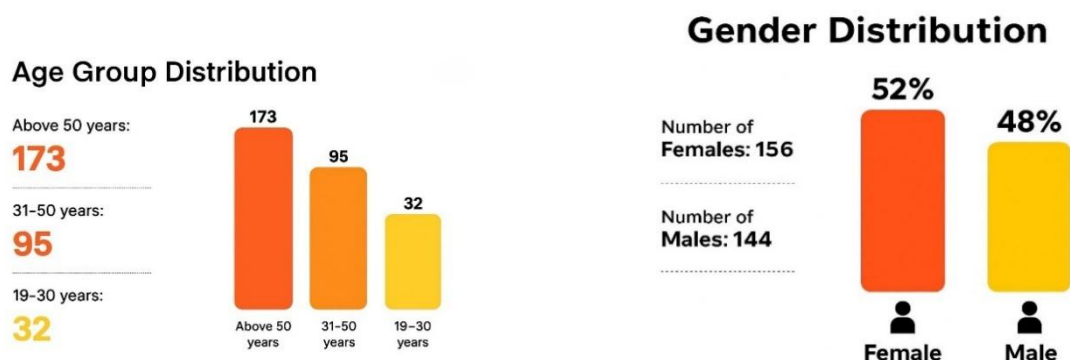


FIGURE 4.2: DISTRIBUTION OF AGE

FIGURE 4.3: DISTRIBUTION OF GENDER

Key Service Indicators and Their Association with Patient Satisfaction in the Video Consultation Group.

Using the Chi-square test, the analysis reveals that most factors particularly those related to teleconsultation quality, service efficiency, and environmental comfort were significantly associated with satisfaction ($p < 0.05$). However, ease of access and affordability did not show any significant association. These findings are presented in Table 4.1, which outlines the relationship between key service indicators and patient satisfaction among 255 video consultation users.

Table 4.1 :Association Between Key Indicators and Patient Satisfaction Among Video Consultation Users (n = 255).

S.No	Category	Factors	Mean	P Value	Significant (P<0.05)
1	Access To Care	Easily reachable?	1.12	0.2823	No
		Travel time?	1.48	0.0316	Yes
2	Patient Satisfaction in Teleconsultation Service	Waiting time?	1.43	0.0029	Yes
		Comfort level with doctor through teleconsultation.	1.15	0.00	Yes
		Doctor understood your problem well?	1.15	0.00	Yes
		Did doctor explain your issue and treatment clearly?	1.14	0.00	Yes
		Overall teleconsultation satisfaction?	1.17	0.00	Yes
		Access to expert doctor through telemedicine?	1.14	0.00	Yes
3	Overall Service	Nearby centre helped faster diagnosis?	1.04	0.00	Yes
		Was the service affordable?	1.01	0.8123	No
		Received quality eye care?	1.06	0.00	Yes
		Reason for your satisfaction?	NA	0.00	Yes
		Recommend vision centre to others?	1.03	0.00	Yes
4	Patient Environment	Was the environment safe and comfortable?	1.02	0.00	Yes

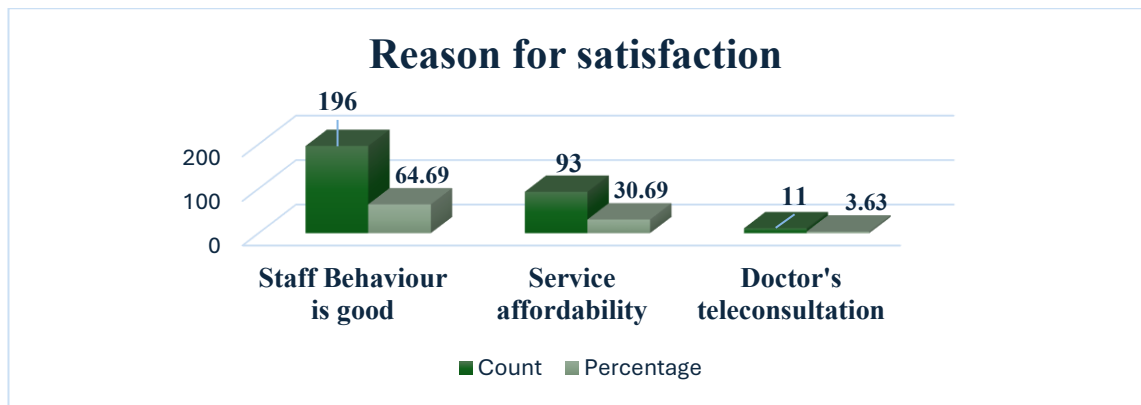


FIGURE 4.4: SPECIFIC REASON FOR SATISFACTION AMONG – VC

Key Service Indicators and Their Association with Patient Satisfaction Among Non-Video Consultation Group.

Using the Chi-square test, the analysis reveals that most service indicators were not significantly associated with patient satisfaction among the non-video consultation group. Only one factor ease of reaching the vision centre showed a statistically significant association ($p = 0.0211$). All other factors, including travel time, affordability, service quality, and environment, did not show significant influence. These findings are presented in Table 4.2, which outlines the relationship between key service indicators and patient satisfaction among 45 non-video consultation users.

Table 4.2: Association Between Key Service Indicators and Patient Satisfaction Among Non-Video Consultation Users (n = 45).

S.NO	CATEGORY	FACTORS	Mean	P Value	SIGNIFICANT ($p < 0.05$)
1	Access To Care	Easily reachable?	1.31	0.0211	Yes
		Travel time?	1.53	0.0937	No
	Overall Service	Nearby centre helped faster diagnosis?	1.04	0.149	No
		Was the service affordable?	1.00	1.00	No
		Received quality eye care?	1.02	1.00	No
		Reason for your satisfaction?	NA	0.8774	No
		Recommend vision centre to others?	1.00	1.00	No
3	Patient Environment	Was the environment safe and comfortable?	1.00	1.00	No

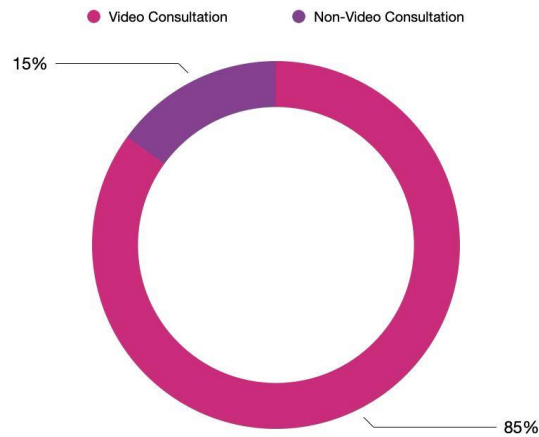


FIGURE 4.5: DISTRIBUTION OF VC AND NON-VC USERS.

Reasons for Not Conducting Teleconsultation

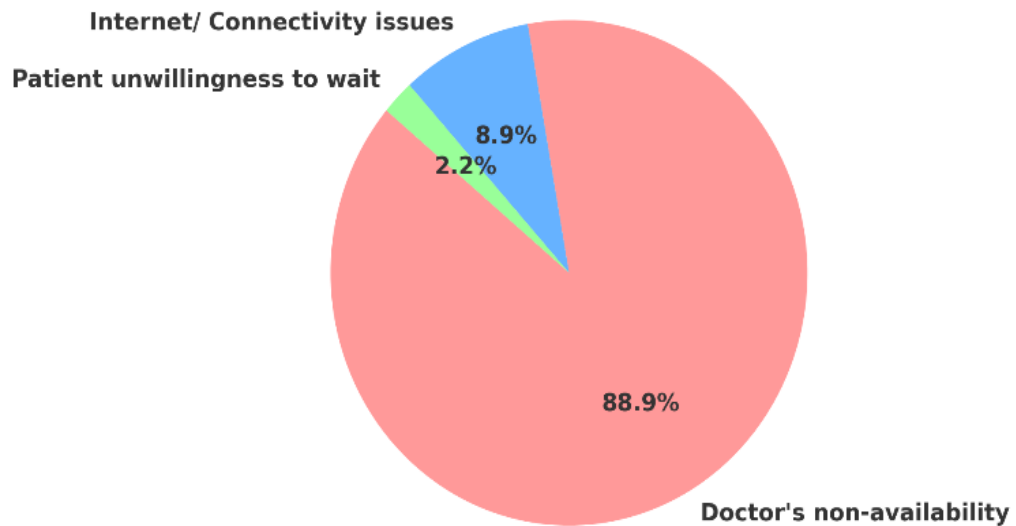


FIGURE 4.6: TELECONSULTATION DOESN'T HAPPEN, THE REASON AMONG NON- VC USERS.

Comparison of Key Service Indicators and Their Association with Patient Satisfaction Between Video Consultation and Non-Video Consultation Groups.

The comparative analysis between the Video Consultation (VC) and Non-Video Consultation groups demonstrates notable variation in the association of service indicators with patient satisfaction. In the VC group, several indicators—particularly those related to doctor–patient communication, service delivery, and environmental factors—showed statistically significant associations ($p < 0.05$), indicating a stronger alignment between structured teleconsultation services and positive patient experiences. Conversely, the non-VC group exhibited limited significance-

with only one factor (ease of access) demonstrating a meaningful association. These findings are summarized in Table 4.3, which presents a side-by-side comparison of service indicators and their statistical relevance across both groups.

Table 4.3: Comparison of Service Indicators and Satisfaction: Video Consultation vs. Non- Video Consultation Groups.

Category	Factor	Mean (VC)	Mean (non-VC)	Significant in VC	Significant in Non-VC
Access to Care	Easily reachable?	1.12	1.31	No	Yes
	Travel time?	1.48	1.53	Yes	No
Patient satisfaction in teleconsultation service	Waiting time?	1.43	NA	Yes	NA
	Comfort level with doctor through teleconsultation.	1.15	NA	Yes	NA
	Doctor understood your problem well?	1.15	NA	Yes	NA
	Did doctor explain your issue and treatment clearly?	1.14	NA	Yes	NA
	Overall teleconsultation satisfaction?	1.17	NA	Yes	NA
	Access to expert doctor through telemedicine?	1.14	NA	Yes	NA
Overall Service	Nearby centre helped faster diagnosis?	1.04	1.04	Yes	No
	Was the service affordable?	1.01	1.00	No	No
	Received quality eye care?	1.06	1.02	Yes	No
	Reason for your satisfaction?	NA	NA	Yes	No
	Recommend vision centre to others?	1.03	1.00	Yes	No
Patient Environment	Was the environment safe and comfortable?	1.02	1.00	Yes	No

Unit-Wise Comparison of Key Service Indicators and Their Association with Patient Satisfaction.

The unit-wise comparison highlights distinct variations in patient satisfaction across Coimbatore and Krishnakoil units. Patients from Krishnakoil expressed greater satisfaction with staff behaviour, whereas those from Coimbatore found the services to be more affordable. Despite these differences, both units reported low satisfaction with the teleconsultation experience with doctors, indicating a common area for service enhancement. These observations are detailed in Table 4.4.

Table 4.4: Unit-Wise Comparison of Patient Satisfaction Indicators.

Unit	Staff Behaviour is Good	Service Affordability	Doctor's Teleconsultation
Coimbatore (N=185)	60.20%	36.60%	3.60%
Krishnakoil (N=115)	75.00%	20.67%	4.00%

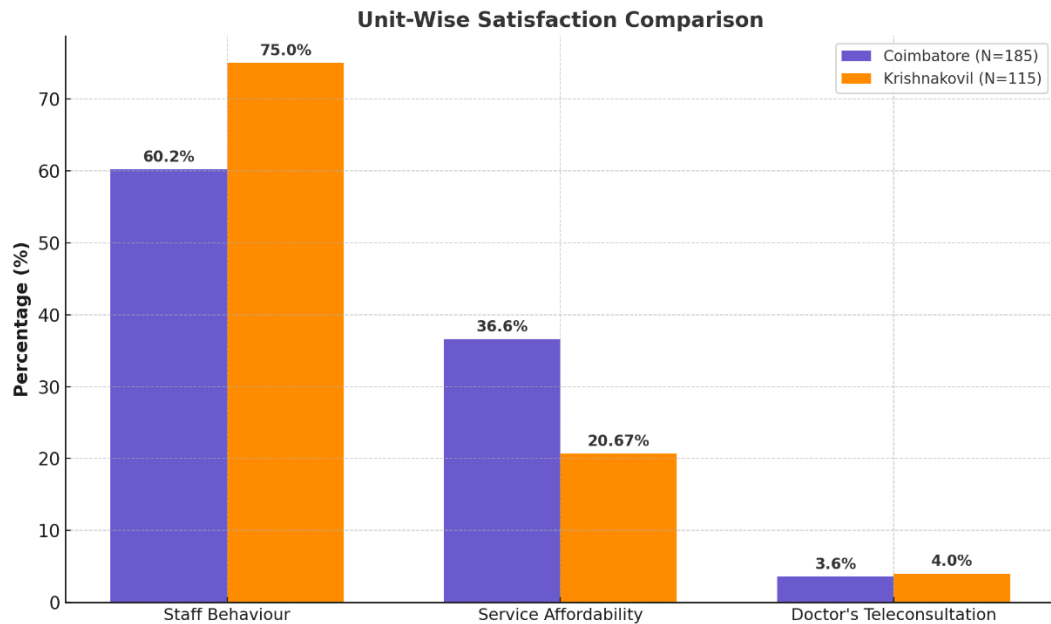


FIGURE 4.7: KRISHNAKOIL AND COIMBATORE UNIT COMPARISON FOR PATIENT SATISFACTION.

CHAPTER 5- DISCUSSION

This chapter presents a detailed interpretation of the research findings obtained from a study of 300 adult patients who received eye care services through eight Vision Centres operated by Sankara Eye Foundation in Tamil Nadu. The centres are located across two units: Coimbatore (Annur, Perur, Sathyamangalam, Karamadai, Pappampatti) and Krishnakoil (Aruppukottai, Rajapalayam, Sivakasi) as shown in (Figure 4.1). Among the total participants, 255 (85%) underwent video consultations via teleophthalmology, while 45 (15%) received in-person consultations only. The demographic analysis revealed that the majority of participants were aged above 50 years (as illustrated in Figure 4.2), reflecting a trend common in community-based ophthalmic services. Gender distribution was relatively balanced, with 52% female and 48% male participants (Figure 4.3). Data collection included 206 face-to-face interviews and 94 telephonic interactions, utilizing convenience sampling and verbal informed consent. A structured questionnaire was used to capture data on key domains such as accessibility, efficiency, doctor–patient interaction, facility environment, and overall patient satisfaction.

Vision Centre and Demographic Distribution

Figures 4.1 through 4.3 display the spread of participants across vision centres, age groups, and gender. The predominance of elderly patients is consistent with Murthy et al. (2020), who found that age-related visual impairments significantly drive demand for accessible eye care at community vision centres. The balanced gender representation supports the view that vision centres serve as an equitable point of access for both male and female patients in semi-urban and rural India.

Key Service Indicators and Satisfaction Among Video Consultation Users

Table 4.1 presents the association of service indicators with satisfaction levels among the video consultation (VC) group. Using the Chi-square test, statistically significant associations ($p < 0.05$) were found between patient satisfaction and several factors including travel time, waiting time, communication comfort, clarity of medical advice, access to an expert doctor, and the overall environment of the centre. These findings are aligned with Rajalakshmi et al. (2021), who emphasized that responsiveness,

communication, and confidence in care are core to patient satisfaction in teleophthalmology.

Notably, ease of reaching the centre and affordability were not significantly associated with satisfaction in the VC group. This may suggest that once access is achieved, the perceived quality of care takes precedence over convenience or cost. This interpretation is consistent with previous findings in the Indian Journal of Ophthalmology (2010), where the subjective experience of service delivery outweighed logistical convenience.

Figure 4.4 details specific reasons for satisfaction, with staff behaviour and service affordability emerging as top contributors. These observations resonate with Choudhury et al. (2012), who identified interpersonal dynamics and trust in staff as essential to patient perception of care quality.

Key Service Indicators and Satisfaction Among Non-Video Consultation Users

In contrast, the non-video consultation (non-VC) group exhibited limited statistically significant associations between service indicators and satisfaction (Table 4.2). Only the factor of 'ease of reaching the vision centre' showed significance ($p = 0.0211$), highlighting physical access as a determinant of satisfaction in the absence of technological or consultative enhancements. No significance was observed for affordability, service quality, or environmental factors. This limited association is reflective of patterns described by Nirmalan et al. (2020), where structural access, rather than quality of engagement, often governs satisfaction in traditional care models.

Figure 4.5 illustrates the distribution between VC and non-VC users, emphasizing the higher adoption of teleconsultation services. Figure 4.6 presents the reasons why teleconsultation was not conducted among non-VC participants, with the most common response being doctor unavailability. This aligns with findings from a 2021 study in Telemedicine and e-Health, which identified workforce limitations and scheduling issues as barriers to sustained telemedicine delivery in resource-constrained settings.

Comparative Analysis of VC vs. Non-VC Satisfaction

Table 4.3 highlights the differences in satisfaction determinants across the VC and non-VC groups. The VC group consistently showed significant relationships between satisfaction and factors such as communication quality, wait time, diagnosis explanation, and environmental experience. These relationships were absent in the non-VC group,

except for ease of access. This contrast underscores the value of structured teleconsultation systems in standardizing patient experience and care quality.

These findings align with Verma et al. (2019), who concluded that well-designed telemedicine frameworks can bridge perceptual and logistical gaps in rural healthcare delivery. They also underscore the importance of continued investment in digital infrastructure, training, and consultative protocols.

Unit-Wise Comparison of Patient Satisfaction

Table 4.4 and Figure 4.6 show the unit-wise comparison between Coimbatore and Krishnakoil centres. Satisfaction with staff behaviour was higher in Krishnakoil, while affordability received a better response in Coimbatore. However, satisfaction with the teleconsultation experience remained low in both units, suggesting a shared limitation in the quality or consistency of virtual interactions with doctors. These patterns mirror findings reported in the American Journal of Public Health Research (2017), which noted that while front-end services and pricing may vary by region, back-end clinical service quality particularly in virtual modes requires systemic strengthening.

This finding indicates that while community engagement and financial models may vary in their strengths, clinical training and telecommunication protocols need uniform enhancement across units to ensure consistent quality.

Strengths of the Study

- The study engaged a considerable sample size ($n = 300$), ensuring meaningful and reliable statistical comparisons.
- Inclusion of both video and non-video consultation groups enabled a detailed understanding of teleconsultation impact.
- Coverage of eight vision centres across two distinct operational units allowed for regional comparison and variation analysis.
- The study's focus on service-level indicators (like staff behaviour, wait time, and affordability) provided practical insights for program improvement.
- Structured questionnaires offered standardization in data collection, which improved data reliability and analysis consistency.
- The evaluation directly reflected community-based vision care experiences, offering valuable insights into semi-urban and rural healthcare delivery.

Limitations of the Study

- Although 18 vision centres operate under the organization, data were collected from only 8 due to the time limitations of the project.
- Feedback from caretakers or parents of pediatric patients was not considered, which could have provided important insights into satisfaction with children's eye care services.
- The cross-sectional design restricts understanding of satisfaction trends over time or after repeated service usage.
- Data collection relied on structured questionnaires only, which may not reflect the full range of patient opinions or feelings.

CHAPTER 6- CONCLUSION

This chapter synthesizes the research findings and translates them into practical, evidence-based recommendations aimed at enhancing the quality of eye care services delivered through Vision Centres. The study, which involved 300 adult participants across eight centres in Tamil Nadu, revealed that teleophthalmology particularly video consultations have a demonstrably positive impact on patient satisfaction. Factors such as effective doctor patient communication, timely access to expert consultations, and the overall patient experience played critical roles in shaping satisfaction outcomes.

Despite these encouraging findings, the research also identified specific areas for improvement. Key gaps were observed in operational continuity during outreach activities, the affordability of services, and the visibility of Vision Centre infrastructure. The following recommendations are based on these insights and are intended to guide future implementation and quality improvement initiatives.

Recommendations:

1. Strengthen Doctor–Patient Communication

- Promote the use of empathetic, patient-friendly language among ophthalmologists and teleconsulting doctors. Simple, reassuring phrases such as “Your eyes are fine, don’t worry” can greatly enhance the emotional comfort of patients.
- Sensitizing doctors in regional language and culturally appropriate communication would further enhance patient trust. Even a short conversation can improve patient trust and engagement, particularly in teleconsultation contexts where physical presence is limited.

2. Improve Continuity of Care Through Optometrist Availability

- During outreach or workplace screening camps, ensure that Vision Centres always remain staffed with at least one optometrist or trained assistant.

- This measure is vital to preventing patient dropouts and service gaps on days when the primary optometrist is engaged in fieldwork.
- The implementation of a dual-optometrist model for field activity days is recommended to maintain uninterrupted service delivery.

3. Enhance Visibility and Accessibility of Vision Centres

- Replace old or poorly visible signage with professionally designed high-contrast boards that can attract the attention of passersby.
- Adopt a visual communication strategy using icons that represent key services, such as:
 - Eye screening
 - Doctor consultation
 - Teleconsultation
- Strategically place these boards at entry points, intersections, and prominent roadside locations to facilitate easier navigation for new patients.

Collectively, these interventions are intended to not only streamline operational efficiency but also elevate patient-centric care. Investing in better communication, staffing reliability, and physical infrastructure will contribute to higher service uptake, stronger patient loyalty, and more sustainable community eye care delivery models.

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CHAPTER 8-ANNEXURES

STUDY TOOL : Google form.

Link: <https://forms.gle/XwPgcQP7ptvLiupXA>

Structured questionnaire

1. Name

2. Age

- < 18 (Children)
- 19-30 years (Younger Adults)
- 31-50 years (Senior Adults)
- Above 50 years (Elderly)

3. Gender

- Male
- Female
- Other

4. Mobile Number

5. Patient ID

6. Vision Centre

7. Date

8. Was the Vision Centre easy to reach from your home?

- Yes
- Somewhat
- No

9. How long did it take you to travel to our vision centre today?

- Less than 15 minutes
- Between 15 and 30 minutes
- Between 30 and 60 minutes

10. Were you informed that your consultation with the doctor would be virtual?

- Yes
- No

11. Did you undergo teleconsultation?

- Yes, with the VC staff's assistance
- No

12. If yes, how long does the patient wait for the teleconsultation?

- Less than 10 minutes
- 10 - 20 minutes
- 20 - 30 minutes
- More than 30 minutes

13. How easy was it for you to access the teleconsultation service?

- Easy
- Okay
- Difficult

14. Did you feel comfortable discussing your eye health issues with the doctor through teleconsultation?

- Yes, very comfortable
- Somewhat comfortable
- Uncomfortable

15. Did you feel the doctor was able to understand your eye problem well during the teleconsultation?

- Yes, Completely
- Somewhat
- No, not really

16. Did the doctor clearly explain your eye condition and next steps (like medication, further tests, or referral)?

- Yes, very clear
- Somewhat
- No, not clear

17. How satisfied were you with the overall teleconsultation experience?

- Very Satisfied
- Somewhat Satisfied
- Dissatisfied

18. Did you feel that the telemedicine at the clinic allowed you to access an expert doctor's services?

- Yes
- Somewhat
- No

19. If teleconsultation doesn't happen, the reason is:

- Doctor's non-availability
- Internet/ Connectivity issues
- Patient unwillingness to wait

20. Does having the vision centre near your area help you get diagnosed more quickly?

- Yes
- Somewhat
- No

21. Did you feel that the service provided by the vision centre was affordable?

- Yes, absolutely
- Not sure
- Not at all

22. Did you feel you received quality eye care services at the vision centre?

- Yes, absolutely
- Not sure
- Not at all

23. Are you satisfied with our overall satisfaction?

- Yes
- Somewhat okay
- No

24. If yes, specific reason for the satisfaction?

- Doctor's teleconsultation
- Staff Behaviour is good
- Service affordability

If no, specific reason

25. Did the environment feel safe and comfortable to you?

- Yes
- Somewhat
- No

26. Would you recommend the vision centre to others?

- Yes
- Maybe
- No

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