PATIENT COMPLIANCE AND SATISFACTION IN INTEGRATIVE AYURVEDIC DERMATOLOGY CARE: A MIXED-METHOD ANALYSIS OF PATIENT-GENERATED FEEDBACK AT KAYAKALP GLOBAL

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by

Ayush Saxena

Under the Supervision and Guidance of

Dr. Ram Krishan Chahar

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Ichelon Consulting Services Pvt. Ltd.

To whom it may concern

This is to certify that **Mr. Ayush Saxena**, has completed his internship at our company, as a **Business Analyst Intern**. The internship duration was from the period of **9th March 2026- 9th May 2026** under the supervision of **Ms. Sabhyaa Gupta** at **Ichelon Consulting Services.**

We at Ichelon, wish **Ayush** all the success in his future endeavors.

Thanks and Regards,

Rohit Gupta Director, Ichelon Consulting Services
540, 5th Floor, JMD Megapolis, Sohna Road, Sector 48, Gurgaon

IIHMR UNIVERSITY

CERTIFICATE

This is to certify that dissertation **titled "Patient compliance and satisfaction in integrative Ayurvedic dermatology care: a mixed-method analysis of patient-generated feedback at Kayakalp Global"** is a record of the research work undertaken by **Ayush Saxena** in partial fulfillment of the requirements for the award of the degree of MBA (Healthcare Analytics) from The IIHMR University, Jaipur under my guidance and supervision and her approach to the research study has been sincere, scientific and analytical.

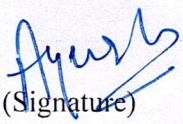
Dr. Ram Krishan Chahar
Assistant Professor

IIHMR University, Jaipur

Date: 23/06/2026

DECLARATION BY STUDENT

I, Ayush Saxena (Roll No. 003, Batch 2024-26), hereby declare that this dissertation titled "PATIENT COMPLIANCE AND SATISFACTION IN INTEGRATIVE AYURVEDIC DERMATOLOGY CARE: A MIXED-METHOD ANALYSIS OF PATIENT-GENERATED FEEDBACK AT KAYAKALP GLOBAL" is my own original work, carried out during my internship at Ichelon Consulting Group, Gurugram under the supervision and guidance of Dr. Ram Krishan Chahar, IIHMR University, Jaipur. This work has not been submitted elsewhere for any degree or diploma. All sources referred to in this dissertation have been acknowledged, and a complete reference list has been provided at the end.



(Signature)

Ayush Saxena

Roll No.: 003

Place: Jaipur, Rajasthan

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Ayush Saxena

ABSTRACT

Title: Patient compliance and satisfaction in integrative Ayurvedic dermatology care: a mixed-method analysis of patient-generated feedback at Kayakalp Global

Author: Ayush Saxena (Roll No. 0003)

Advisor: Dr. Ram Krishan Chahar

Keywords: Patient compliance, treatment adherence, Ayurveda, integrative medicine, vitiligo, psoriasis, patient satisfaction, online reviews, sentiment analysis, healthcare analytics

Introduction: Making patients adhere to their treatment is one of the more challenging tasks when dealing with chronic skin disorders such as vitiligo and psoriasis, which usually require months to bring any visible results. Kayakalp Global is a dermatologist from Delhi-NCR, working under an integrated model of Ayurveda-Allopathy in various Indian cities. However, despite having gathered more than 3,800 reviews on Google My Business (GMB) over time, this patient feedback had not been systemically analyzed to discover the actual predictors of patients' satisfaction or influence adherence.

Objectives: The purpose of this research was to analyze the Google reviews of Kayakalp Global, in order to identify the level of patient satisfaction, major drivers of compliance and non-compliance, and provide evidence-based recommendations.

Methodology: An explorative qualitative-quantitative secondary data study was conducted using 3,821 GMB reviews (3,094 textual). The data was cleaned, deduplication took place, and then it was categorized into 7 categories (treatment efficacy, doctor and staff communication, compliance & follow-up assistance, pricing & sales pressure, authenticity and trust, adverse effects, and advocacy) with the use of keyword-based content analysis methodology aligned with stars rating by WHO adherence multidimensional model.

Results: The overall average rating was 4.68 out of 5, with 93.8% of all reviews receiving ratings of 4 or 5 stars. The two most common themes were treatment effectiveness (54.8%) and patient advocacy (31.8%). Among the 148 negative reviews (1-2 stars), issues concerning cost and sales pressure occurred eight times more often than in positive reviews (27.0% versus 3.3%), while trust issues were seen five times more frequently (23.6% versus

4.6%). Of the 654 reviews mentioning a timeline for the treatment, the median time for an effect to become apparent was three months — just as expected from the clinical literature concerning vitiligo and psoriasis.

Conclusion: The majority of Kayakalp Global's patients seemed generally satisfied — especially with the results of the treatment and doctor communication. On the other hand, a constant trend emerged, where some number of reviews highlighted the fact that provider responsiveness drops sharply after being paid, as well as issues regarding price clarity and information about topical medications' ingredients. Both are structural problems and can be solved through improved follow-up procedures and a patient education moment after 2-3 months.

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LIST OF ABBREVIATIONS

Abbreviation	Full Form
AYUSH	Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homeopathy
CAM	Complementary and Alternative Medicine
GMB	Google My Business
HSQ-5D	Health Service Quality – 5 Dimensions (framework)
KAP(S)	Knowledge, Attitude, Perception (and Satisfaction)
MBA	Master of Business Administration
NCR	National Capital Region
QoL	Quality of Life
RCT	Randomised Controlled Trial
WHO	World Health Organization

CHAPTER 1: INTRODUCTION

1.1 Background and Context

Adhering patients to prolonged treatment regimens is a challenge in almost all healthcare facilities, yet it is even more challenging in chronic dermatological diseases such as vitiligo and psoriasis. The World Health Organization (WHO) defines medication adherence as "the extent to which a patient's behavior – taking medications, following diets, and making lifestyle changes – coincides with medical advice" (1). The WHO suggests that the adherence is dependent on the interaction between five interrelated dimensions: patient-related factors, disease-related factors, therapy-related factors, health-care system factors, and socioeconomic factors. A large review afterwards has proved that there is no one determining factor of treatment compliance, but the factors relating to the health-care system appear to be the most important ones in all disease types (2). The above WHO model, which was originally elaborated in the case of chronic diseases and drug treatment, can be applied to the field of integrative dermatology quite successfully.

The problem becomes even more complicated in India, where a considerable number of patients resort to treatment by means of Ayurveda, which is used either in addition to allopathic treatment or as an alternative treatment method (3). In addition to the traditional stand-alone clinics, Ayurveda is now provided via structured networks in several cities which offer a superstructure of Ayurvedic formulations along with modern diagnostic procedures and digital engagement tools as well as courier-based delivery of medication. This creates a real management challenge.

Unlike conventional medicine where the effects could be observed in a few days or weeks, treatment of the skin diseases using Ayurveda would take months along with strict compliance with a diet as well as change of lifestyle. Thus, the issue of patient compliance is crucial not only from a clinical point of view but also from an operational one. The present study will deal with the issues related to two skin diseases: vitiligo and psoriasis.

The conditions are chronic and highly visible, and they are associated with significant stigma. Adherence to the treatment of psoriasis in terms of topical applications was found to vary between 35% and 72% within two to eight weeks of therapy (4). Longitudinal studies showed that adherence decreases over time regardless of initial patient motivation (5). Motivation in the case of vitiligo is weakened by the slow rate of repigmentation, and previous failures in treatment, which lead to non-adherence over time (6). These are not

isolated issues – they are fundamental to the conditions and need to be handled in order for treatment to be successful.

1.2 The Indian Integrative Dermatology Market

The market dynamics for integrative dermatology in India have changed significantly in recent years. With government support for the AYUSH system, increased urban interest in complementary medicine, increasing disposable incomes focused on dermatological and cosmetic treatments, and the acceptance of telemedicine due to the pandemic, conditions have emerged where multi-city networks for integrative health can be effective.

Some of these companies have scaled up from single-city clinics to multi-location networks offering an integrative treatment method combining traditional Ayurveda with advanced diagnostics and patient communication methods. Kayakalp Global is just one of these companies. This kind of scaling, however, raises issues of compliance that don't arise with single-city clinics. As the bulk of the patient management process takes place offsite using various modes of communication – telephonic interactions, video conferencing, and couriered medications – sustaining patient engagement consistently is structurally challenging. Communication, follow up process, and counseling consistency all become as equally important as the protocol of treatment itself. Despite the literature on adherence having focused considerably on the individual and disease level barriers to adherence, the organizational perspective on compliance in multi-city integrative settings has been less systematically studied.

1.3 Organizational Profile: Kayakalp Global

The organization 'Kayakalp Global' was incorporated in 1992 by Dr. Shailender Dhawan and Dr. Suman Dhawan. Operating out of Faridabad, Delhi-NCR, the organization today has its operations spanning over several cities such as Delhi, Lucknow, Mumbai, Pune, Indore, Jaipur, Patna, and various cities in Gujarat, Chhattisgarh, and Uttar Pradesh.

The clinical philosophy of the organization is an amalgamation of Ayurveda based internal medication, herbal based topical treatment, diet-based advice, phototherapy and dermatology from allopathic treatments into a single approach to curing patients. Over three decades of experience, it is claimed that the organisation has seen more than 30,000 cases of patients with vitiligo and more than 10,000 cases with psoriasis, along with many cases of skin diseases caused by fungi.

The key feature about the delivery of care at Kayakalp Global is the significant extent to which remote delivery takes place. Most of the patients are diagnosed and managed remotely, through telephonic/video calls, and medicines, dietary regimes, and follow-up plans are delivered through a logistics network. The result of this hybrid method of delivery is that it becomes imperative for the company to maintain communication with its patients to ensure adherence to treatment plans. Without such constant follow-up, the patients have to take up a rather difficult and long-term protocol on their own.

1.4 Problem Statement

Although having received more than 3,800 patient reviews on Google My Business (GMB), Kayakalp Global had no way of systematically monitoring patients' satisfaction levels nor collecting any compliance-related data from the reviews. These reviews are available in an open platform, which contains first-hand account of patients about their treatment experience – what made them adhere to the protocol, what didn't, and what frustrated them. This is a loss of a chance. The online reviews, especially when gathered from a source such as GMB, contain organic, unguided responses from patients that would be hard to achieve in any primary survey. Such is precisely what this study aimed at: analyzing the current review corpus in a structured manner in order to uncover satisfaction and adherence trends.

1.5 Research Gap

The current literature contains three major research gaps which made the current study necessary. Firstly, although there are many works devoted to the problem of adherence in vitiligo and psoriasis cases, almost all of them come from Western-based clinical trials, hospital-based databases, and specific disease-related studies (4,5,6,7,8). It is hard to say how those results may apply to the Indian integrative practice in telemedicine context and under conditions of high cost-sensitivity and Ayurveda-compliance.

Secondly, even though there is an increasing number of studies on patient satisfaction within the Ayurvedic healthcare system in India, most of them are concentrated on the general perceptions of the system rather than the analysis of adherence barriers in specific organizations or diseases (3,9,10). There are practically no organization-based studies of adherence in integrative dermatological settings. Third, online review mining has been found to be a credible method for researching healthcare services in several international studies (11,12), but has not yet been applied to Indian integrative practices. To this researcher's knowledge, no past study has integrated GMB review mining with adherence

theory in order to analyze patient compliance at an Indian integrative Ayurveda-Allopathy dermatology practice. This particular integration is the purpose of this dissertation.

1.6 Research Questions

The present study addresses the following four questions:

1. How does the distribution of star ratings indicate patient satisfaction levels at Kayakalp Global, and how is it affected by the patients' perception of treatment success?

2. What are the major themes in the reviews that differentiate between satisfied and unsatisfied patients, and which of those correspond to the WHO adherence framework categories?

3. What behaviors, barriers and expectations related to compliance have patients described in their reviews, including follow-up visits, diet and slow response time problems?

4. What recommendations could be made based on this analysis for improving compliance and patient satisfaction at Kayakalp Global? 1.7 Research Objectives

by patients about Kayakalp Global in order to determine their level of satisfaction and to understand what themes contribute to treatment compliance or non-compliance in an integrated dermatology practice with both Ayurveda and Allopathy.

Further aims are:

1. To describe the distribution of star ratings and to compare it to the proportion of those reviews that mentioned visible improvement.

2. To develop and implement a thematic coding scheme based on the WHO adherence model in order to classify patients' responses into compliance themes.

3. To compare the thematic structure of positive and negative reviews and to identify service failures that cause patient dissatisfaction.

4. To compare our findings to the existing scientific literature on adherence to vitiligo, psoriasis and integrative Ayurveda treatment.

5. To suggest evidence-based interventions for compliance improvement at Kayakalp Global.

1.8 Scope and Relevance of the Study

The study is limited to the analysis of secondary data from the publicly available online review platform of Kayakalp Global Delhi-NCR location. No direct contact with patients was made and no clinical records were used. Its significance is twofold. Academically, it brings an India-specific, condition-specific application of GMB review mining to the health services literature — a combination that is not well represented in existing work, particularly outside high-income primary care settings (11,12). Practically, it provides Kayakalp Global with a low-cost, replicable method for ongoing patient experience monitoring that does not require a fresh primary survey each time.

1.9 Chapter Plan

Chapter 2 reviews the relevant literature across three areas: treatment adherence in chronic dermatology, patient satisfaction in Ayurvedic and integrative healthcare, and online review mining as a research method. Chapter 3 describes the research design, data source, coding framework, and analysis approach. Chapter 4 presents the quantitative and thematic results. Chapter 5 discusses those findings against the literature and acknowledges limitations. Chapter 6 concludes with practical recommendations and directions for future research.

CHAPTER 2: REVIEW OF LITERATURE

2.1 The WHO Multidimensional Model of Adherence

The conceptual backbone of this study is the WHO's multidimensional model of adherence (1). Rather than treating non-compliance as a patient character flaw, the WHO framework identifies five separate dimensions that together shape whether a patient follows through with treatment: patient-related factors (motivation, beliefs, expectations), condition-related factors (severity, visibility, progression), therapy-related factors (complexity, duration, tolerability), healthcare-system factors (communication quality, follow-up consistency, support availability), and socioeconomic factors (affordability, accessibility, social support).

What makes this framework particularly useful here is that later reviews have confirmed its explanatory value across disease categories. Kardas, Lewek and Matyjaszczyk (2013), synthesising 51 systematic reviews across 19 disease categories, found that no single dimension dominates — adherence is multidetermined (2). However, healthcare-system factors, specifically continuity of care and the quality of follow-up, emerged as the most consistently influential across conditions. This is a key finding for an organisation like Kayakalp Global, where much of the healthcare-system interaction happens remotely.

For the purposes of this study, the five WHO dimensions map directly onto Kayakalp Global's patient journey and provide the organising logic for the thematic coding framework developed in Chapter 3.

2.2 Ayurveda and Patient Satisfaction in India

The extent of Ayurvedic therapy adoption in India is quite clear from research findings. A cross-sectional study conducted in a tertiary care hospital in Mumbai found that roughly 80% of the allopathic doctors reported the adoption of Ayurvedic treatment by patients, which was either alongside or in place of allopathy (3). Ayurveda is not a niche choice in the Indian healthcare system but a major part of it.

There are several studies on the perception of patients towards Ayurvedic care, which have all pointed to positive perceptions of personalized treatment and reduced side effects as compared to allopathic medication (9). A systematic review in 2025 based on PRISMA framework and including 20 studies and almost 8,000 participants has shown high satisfaction rates for Ayurvedic care among Indian patients. Personalization and safety

were the most important aspects that drove such high rates. Nevertheless, lack of proper knowledge on the correct usage of the treatment was one of the problems identified in the same review (9).

This is directly related to the operational strategy employed by Kayakalp Global. In this case, satisfaction in the integrative context is not just a matter of the Ayurvedic component being effective; it has everything to do with the manner in which these two treatment approaches are integrated and presented to the patient. As per Gupta (2025), satisfaction levels are high where there is coordination of integration and explanation to the patients, and the incidence of side effect concerns is low (10). The very nature of this integration is a compliance variable.

In terms of methodology, most of the Indian studies conducted on this topic have employed either structured questionnaires or knowledge attitude practice questionnaires. Such studies provide important insights but are limited in their scope as they can reveal only those things that the researcher thinks to ask. Online review is not subject to such constraints as it reveals whatever the patients feel like mentioning.

2.3 Dietary and Lifestyle Compliance in Ayurvedic Therapy

Another unique feature of the Ayurvedic treatment of conditions is the central role that is played by Pathya-Apathya, or a set of instructions on what to eat and not to eat and where to live, in the treatment process (13). When undergoing an Ayurvedic treatment of vitiligo, patients not only take medicines but change the whole approach to their diet and environment for the sake of making the medicines work.

This implies an extra level of compliance problem, which differs fundamentally from the simple question of taking tablets. Patients need to change something in their lives on a daily basis during long periods of time, even not getting any feedback from the body that something is changing in the right direction. The non-compliance with Pathya-Apathya is always related to bad results of the treatment (13). In such a case, the dietary compliance is not something additional to the treatment.

In the case of Kayakalp Global, which offers dietitian consultations and diet charts, it is obvious that patient feedback on these issues is of direct compliance relevance.

2.4 Treatment Adherence in Vitiligo and Psoriasis

The body of clinical literature available about adherence with regard to vitiligo and psoriasis points to one unambiguous conclusion: patients start the course of treatment with the readiness to follow the instructions, however, such a readiness wanes, and, moreover, does so before any effects are achieved. Devaux et al. (2012) conducted an analysis of 22 studies and concluded that topical psoriasis adherence was anywhere from 35% to 72% of prescribed dose, even over the span of two to eight weeks (4).

Alinia et al. (2017), basing their work on the results obtained from the use of electronic monitoring for one entire year, described long-term psoriasis adherence as "abysmal" – declining rather rapidly even during the first weeks after the commencement of the treatment course (5). This is a rather sobering yardstick. If adherence starts to dwindle so fast in the case of a rather simple topical course, then the difficulty of following the protocol which lasts several months and includes the necessary changes in diet is much higher. Vitiligo's long process of repigmentation is a compliance problem in itself. In their review of 130 studies, Picardo et al. (2022) identified poor response to therapy and previous treatment failure as the most frequent predictors of decreased compliance and quality of life in patients with vitiligo (6). Moreover, Da Costa et al. (2026) introduced a psychological aspect by demonstrating that the burden of a disease in terms of psychological consequences such as social anxiety and lack of self-esteem affects compliance and creates a vicious circle wherein a visible disease decreases motivation for its treatment (8).

The obvious conclusion is that in the months prior to visible effects of the treatment – i.e., two to six months identified in this study – the chance of non-compliance is greatest (7).

2.5 Remote and Technology-Mediated Adherence Support

The provision of care by Kayakalp Global takes place to a large extent through remote methods: telephone consultations, online channels, and medicine delivery via courier services. The issue of effectiveness of remote support in terms of adherence maintenance becomes relevant in this regard.

A study carried out by Svendsen et al. (2021) in which a structured follow-up by nurses of psoriasis patients was implemented during 48 weeks proved that regular reminders, check-ups, and communication increase long-term topical adherence (7). The mechanism behind

this effect was not the complexity but the consistency of the process. As long as patients knew that there will be a check-up, they continued to do what they were supposed to do. Hence, structured follow-up is proven to be effective in promoting adherence and can be used in the remote delivery model.

However, some limitations exist. In the majority of remote adherence intervention studies, there were relatively short follow-up periods. It remains unclear whether the same effects will take place on the longer periods of time required for the treatments in integrative dermatology (six months to two years). Patient reviews can be used as another source of information regarding these questions.

2.6 Online Patient Reviews as a Research Method

Online doctor reviews, especially those posted on platforms such as Google Maps and GMB, have lately been applied as a healthcare service research tool, and for a good reason. They provide vast amounts of naturally generated and unsolicited patient reviews, which are difficult and costly to generate through survey tools. Zhang et al. (2025) formulated HSQ-5D conceptual model by applying text-mining analysis to a large dataset of online doctor reviews in China. They identified five healthcare quality dimensions – expertise, process, attitude, empathy, and outcome – that significantly correlated with patient decision-making (11). Aunimo and Romero Ternero (2025) conducted an analysis of more than 55,000 Google Maps reviews on primary care institutions in Finland and Spain. They found that star ratings and sentiments in the reviews were moving synchronically in time, proving the validity of using GMB reviews as a patient perception proxy (12).

The strengths of this approach include low cost of data acquisition, large sample, unbiased review generation, and the true-to-life patient experience representation. The present study addresses the interpretability concern by adopting a transparent keyword-based coding framework rather than a machine-learning sentiment model. This trades some precision for transparency, but given the multilingual Hindi-English-Hinglish nature of the corpus and the practitioner-facing nature of the recommendations, that is a reasonable trade-off.

2.7 Summary of Literature and Identification of the Research Gap

Table 2.1 below summarises the key studies reviewed.

Table 2.1: Summary of Literature Reviewed

Author(s) (Year)	Study Location/Context	Sample/Scope	Salient Findings
WHO (2003) (1)	Global; policy report	Conceptual framework	Definition of adherence and the five-dimensional approach employed in this study as the conceptual framework.
Kardas, Lewek & Matyjaszczyk (2013) (2)	Multi-country; review of reviews	51 systematic reviews, 19 disease categories	None of these variables is predictive of adherence; healthcare system variables (continuity, follow-up) appear to have been more influential.
Gawde, Shetty & Pawar (2013) (3)	Mumbai, India; tertiary hospital	Cross-sectional, allopathic resident doctors	About 80 percent of Indians have used Ayurveda either instead of or along with allopathic medicine in their lifetime.
Devaux et al. (2012) (4)	Multi-country; systematic review	22 studies, 1980-2011	Adherence rates to topical psoriasis therapy vary from 35% to 72%, but poor effectiveness experience and the burden of time are the key factors causing dropout.
Alinia et al. (2017) (5)	USA; 1-year RCT	Electronic monitoring, psoriasis patients	Poor adherence to long-term topical psoriasis therapy characterized as 'abysmal'; rapidly falls off shortly after the start of the treatment.
Picardo et al. (2022) (6)	Global; systematic review	130 studies, 1996-2021	The slow response and failure of previous treatments are main factors that reduce adherence in patients with vitiligo.
Svendsen et al. (2021) (7)	Denmark; RCT	~114 psoriasis patients, 48 weeks	Strategic follow-up provided by nurses (reminders, building trust) increases the long-term adherence to topical treatments.
Da Costa et al. (2026) (8)	Global; narrative review	QoL/psychosocial vitiligo literature	The cycle of visible disease burden and psychological stress negatively impacts adherence.
Hazra et al. (2025) (9)	India; PRISMA review	20 studies, 7,952 participants	Patient satisfaction with Ayurveda high due to its personalization and perceived safety; poor collaboration with allopathic treatment in urban areas privately.
Gupta R. (2025) (10)	Global; narrative review	Conceptual/clinical	Effective collaboration improves both satisfaction and reduces concerns about side effects.
Zhang et al. (2025) (11)	China; text-mining study	Large-scale online doctor reviews	Establishes HSQ-5D method for transforming the review texts into quality measurements in healthcare.
Aunimo & Romero Ternero (2025) (12)	Finland & Spain; sentiment analysis	55,043 Google Maps reviews	GMB stars and review sentiments are reliable indicators of perceived patient quality over time.

Taken together, the literature points in a consistent direction. Adherence is multidimensional and healthcare-system factors are among the most modifiable (1,2). Indian Ayurveda patients report high satisfaction but within a system where dietary compliance reinforcement is weak and integration quality varies (3,9,10,13). The specific

conditions Kayakalp Global treats — vitiligo and psoriasis — carry well-documented slow-response adherence risk that structured follow-up can partially address (4,5,6,7,8). And online reviews, particularly GMB reviews, are a validated research method for capturing patient-perceived healthcare quality (11,12). What has not been done is combining all three of these — condition-specific adherence theory, integrative Ayurvedic care context, and GMB review mining — in a single study of an Indian provider. That is the gap this dissertation attempts to close.

CHAPTER 3: METHODOLOGY

3.1 Research Design

The current study employs a descriptive and mixed methods research design, relying on secondary analysis of publicly accessible patient-generated reviews. Both the quantitative components (star rating distribution, thematic frequencies, cross-tabulation) and the qualitative components (thematic interpretation of review narratives) have been utilized to provide a holistic description of patient satisfaction and compliance experiences at Kayakalp Global.

The research design is observational and cross-sectional. The analysis of the reviews has been conducted once in time without any intervention, patient interaction or experimentation. The unit of analysis is an individual GMB review. It corresponds to the way similar datasets of healthcare reviews have been analyzed in the literature (11,12).

3.2 Key Research Questions

The methodology has been designed to answer the following four questions:

1. What is the general distribution of patient satisfaction as expressed by GMB star ratings?

2. Which of the themes in the review dataset are more frequently associated with satisfaction and dissatisfaction and how are they mapped onto the WHO adherence framework?

3. Which compliance-related behaviors and barriers are expressed in the review narratives?

4. What are the practical recommendations for improvement that could be derived from the results?

3.3 Study Setting and Population

The study covers all GMB reviews available for Kayakalp Global's primary listing at the time of data extraction in June 2026. A census-based approach was used — rather than sampling, all available reviews were included. This eliminates sampling error, though it does not eliminate the platform-related biases discussed in Section 3.9.

3.4 Data Source and Extraction

The review data was scraped from GMB using an automatic Google Map Review Scrapper. The scraped data included display name of reviewer, star rating, text of review (in case of text reviews) and date of posting the review. The raw output file had 3,827 records in total. Screening of data resulted in the detection of 6 duplicates (duplicates were detected based on name of reviewer, their rating and review text). The final dataset consisted of 3,821 reviews, including 3,094 (81.0%) reviews containing text along with the star rating and 727 (19.0%) rating-only reviews. The thematic analysis was performed on the text-containing dataset. Statistics of the star ratings are provided for the entire dataset.

3.5 Data Cleaning and Preparation

The dataset was cleaned to remove any remnants of HTML formatting codes. The corpus of reviews included English, Hindi and Hinglish (Hindi text written in English letters). Reviews were not filtered according to language. They were not translated either. The preservation of the language in which each particular review was posted was vital for proper contextualization – especially for colloquial Hinglish.

3.6 Study Instrument: Thematic Coding Framework

The coding framework employed for categorization of content in the reviews was based on keywords and theme anchors. Sentiment analysis algorithms that have been developed were not used because the typical models in use have been optimized for English language and are not effective for analyses involving Hindi or Hinglish language reviews.

The coding framework was developed through a combination of both deductive and inductive logics. The former was done based on the WHO dimensions of adherence and the literature on dermatology treatment adherence. The latter involved identifying vocabulary and expressions that were used in reviews, which was done through manually reading of a stratified sample of reviews in different star rating categories. Seven themes were finally identified.

Table 3.1: Thematic Coding Framework

Theme	WHO Dimension	Construct Measured	Example Indicators
Treatment Effectiveness / Visible Results	Condition-related	Perceived clinical improvement or absence	"result", "improvement", "theek", "no fayda"

Theme	WHO Dimension	Construct Measured	Example Indicators
Doctor/Staff Communication & Empathy	Healthcare-system-related	Quality of provider-patient interaction	"doctor", "dietitian", "polite", "misbehave"
Compliance & Follow-up Support	Healthcare-system-related	Continuity of contact and adherence support	"follow up", "reminder", "diet chart", "not respond"
Cost, Sales Pressure & Value	Socioeconomic	Affordability and perceived commercial pressure	"expensive", "force", "package", "refund"
Trust & Authenticity Concerns	Therapy-related	Confidence in legitimacy of provider/treatment	"fake", "scam", "genuine", "dhoka"
Side Effects / Adverse Reaction	Therapy-related	Tolerability of prescribed regimen	"side effect", "itching increase", "worse"
Advocacy / Recommendation	Patient-related (outcome proxy)	Willingness to endorse provider to others	"recommend", "thankful", "best hospital"

The binary coding of individual reviews was done with respect to themes and hence a particular review could have several themes. The coding framework has been validated by ensuring the extent to which the presence of themes was consistent with star ratings, where satisfaction positive themes like Treatment Effectiveness and Advocacy were significantly more common in 4-5 star ratings, while Satisfaction negative themes like Cost/Sales Pressure, Trust and Side effects were significantly more common in 1-2 star ratings.

3.7 Plan of Analysis

The process of analysis was undertaken in four different stages. Stage one comprised a descriptive analysis of the star ratings, by computing the mean score as well as its distribution according to whether it fell in positive (4-5 stars), neutral (3 stars), and negative (1-2 stars) categories. Stage two comprised counting the frequency of themes in all the reviews containing texts to discover the most common themes. Stage three comprised the cross tabulation of theme presence with respect to star rating bands to find the themes that were distinguishing between satisfied and unsatisfied customers. Stage four comprised the analysis of the duration of treatment mention in text reviews, with the extraction of specific months of treatment linked to improvement.

All the data analyses were done in python using the pandas library.

3.8 Ethical Considerations

The study relies on freely available, voluntarily shared patient reviews only. Neither patients have been approached nor accessed any clinical data and no protected health information has been used during the research. While reviewer names were included in the database, they have not been included in any reports. All examples included in Chapter 4 are paraphrased in order to preserve confidentiality of the content expressed by patients.

3.9 Limitations of the Methodology

There are three major methodological limitations that need to be acknowledged from the outset. First, GMB reviews are self-selected, meaning that those people who leave reviews differ systemically from people who do not do that. Patients who have particularly good or bad experience are overrepresented among reviewers. Hence, star ratings should not be considered literally representing level of patients' satisfaction with Kayakalp Global.

Second, keyword-based framework might fail to identify sarcasm, implicit negations, and idiomatically expressed meanings. Yet, manual inspection of the flagged categories minimized this potential issue.

Third, the study is observational. It identifies associations — between certain themes and low ratings, between follow-up failure and dissatisfaction — but cannot establish causality. Causal claims would require a controlled study design or primary data collection. These limitations are real but do not fundamentally undermine the study's diagnostic and practical value.

CHAPTER 4: RESULTS

4.1 Overview of the Review Corpus

After removing six duplicate entries, the working dataset comprised 3,821 GMB reviews of Kayakalp Global. Of these, 3,094 (81.0%) contained free-text comments alongside the numeric star rating, and the remaining 727 (19.0%) were star-only entries. Thematic analysis was carried out on the text-bearing subset (n=3,094); star rating statistics are reported for the full corpus (n=3,821).

4.2 Star Rating Distribution and Overall Satisfaction

The mean star rating across the full corpus was 4.68 out of 5. Table 4.1 below shows the full distribution.

Table 4.1: Distribution of Star Ratings (N=3,821)

Star Rating	Number of Reviews	% of Total	Cumulative %
5 — Excellent	3,136	82.1%	82.1%
4 — Good	439	11.5%	93.6%
3 — Neutral	65	1.7%	95.3%
2 — Poor	19	0.5%	95.8%
1 — Very Poor	162	4.2%	100.0%

Combining the two highest and two lowest star bands: 93.6% of reviews are positive (4-5 stars), 1.7% are neutral (3 stars), and 4.8% are negative (1-2 stars). There are two interesting aspects of this distribution. First, there are significantly more 1-star reviews (4.2%) compared to 2-star reviews (0.5%) — a bimodal distribution typical for the online patient-reviewing environment, where disgruntled patients usually pick the lowest rating available. Secondly, overall positive skew is slightly higher than the one of the GMB primary-care benchmark described in literature (the skew exists but usually does not reach such values before a service disruption takes place) (12).

4.3 Thematic Frequency Across the Corpus

All 3,094 text-containing reviews were coded using the seven themes framework. Figure 4.2 shows how frequently each theme occurred, regardless of the star rating.

The Theme Treatment Effectiveness / Visible Results occurs in 54.8% of all text-containing reviews. It clearly shows that the topic that patients want to discuss the most and that is driving the rating is the effectiveness of the treatment. Next after it comes the theme Advocacy / Recommendation (31.8%), followed by the themes Doctor/Staff Communication and Empathy (29.8%). The four remaining themes — Compliance and Follow-up Support (6.3%), Trust and Authenticity Concerns (5.6%), Cost and Sales Pressure (4.5%), and Side Effects / Adverse Reaction (3.4%) — each appeared in fewer than 7% of reviews overall. These low overall frequencies, however, conceal a sharp divergence when the data is split by satisfaction level.

4.4 Thematic Composition by Satisfaction Level

To identify which themes specifically differentiate satisfied from dissatisfied patients, theme frequencies were cross-tabulated against three rating bands: positive (4-5 stars, n=2,903), neutral (3 stars, n=43), and negative (1-2 stars, n=148). Table 4.2 and Figure 4.3 summarise the results.

Table 4.2: Thematic Mention Frequency by Satisfaction Band (% of reviews within band)

Theme	Positive (4-5★) n=2,903	Neutral (3★) n=43	Negative (1-2★) n=148
Treatment Effectiveness / Results	55.4%	62.8%	41.2%
Advocacy / Recommendation	33.0%	25.6%	10.1%
Doctor/Staff Communication	29.9%	18.6%	31.1%
Compliance & Follow-up Support	6.2%	4.7%	8.1%
Trust & Authenticity Concerns	4.6%	11.6%	23.6%
Cost, Sales Pressure & Value	3.3%	7.0%	27.0%
Side Effects / Adverse Reaction	2.8%	0.0%	15.5%

The three themes exhibit positive skewing patterns as they have higher frequency among the positive reviews compared to the negative ones. Advocacy/Recommendation occurs 3.3 times more in the positive reviews, whereas Treatment Effectiveness occurs 1.3 times more frequently in the positive reviews, although in the negative reviews it still has the highest frequency.

Four themes demonstrate strong negative skewing. The Cost and Sales Pressure theme occurs in 27.0% of negative reviews compared to 3.3% of positive ones, which results in 8.2 times higher occurrence of the theme in the negative reviews. For Side Effects/Adverse Reaction there is a 5.6-fold difference between the frequencies of positive and negative reviews (15.5% vs 2.8%). Trust and Authenticity Concerns theme exhibits 5.2-fold difference (23.6% vs 4.6%). Compliance and Follow-up Support is 1.3 times more frequent in the negative reviews (8.1% vs 6.2%), as almost all of the mentions of the follow-up support in negative reviews are related to failure rather than success.

Doctor/Staff Communication is the only theme that demonstrates almost equal frequency among positive and negative reviews (29.9% vs 31.1%).

4.5 Reported Time to Visible Improvement

Of the 3,094 text-bearing reviews that contained any discussion of the patient's improvement or lack thereof, 654 (21.1%) provided an explicit statement of a treatment duration. In almost all cases, this referred to 'X months' or its Hindi/Hinglish counterpart 'X mahine'. A breakdown of the reported durations is illustrated in Figure 4.4.

The average duration reported until visible improvements were noted was 3 months. 3 months was also the most common duration reported, seen in 207 out of the 654 reviews containing durations (31.7%). The interquartile range was 2 to 6 months, with some reports stretching out to 18 months. This finding is a direct affirmation of the slow-response adherence risk as observed in the clinical literature related to both vitiligo and psoriasis (4,5,6). The 2-6 month range that the patient mentions as the time until visible results is exactly the time during which adherence to topical therapy begins to deteriorate (5), making it the riskiest period for dropout at Kayakalp Global.

4.6 Illustrative Qualitative Findings by Theme

In the next part, the results of the qualitative analysis of reviews for each of the negative satisfaction themes are provided briefly. These themes contain the greatest number of diagnostic findings to be used for recommendations in Chapter 6.

Compliance and Follow-Up Support:

One consistent trend related to this theme was the before and after payment comparison. Several reviewers mentioned being called multiple times — up to ten times in one day

before payment completion. Typical examples were unresponsive follow-up calls and non-compliance with the promise of regular check-ins. It should be noted that this theme emerged in the context of dissatisfaction, not success.

Cost, Sales Pressure and Value:

Communication tone change from consultation to sales was the key trend of this theme. In particular, being asked to make a payment without any information regarding what is included in the package, doubts concerning the cost of the courier delivery of the medication, and problems with the prescription form obtaining were the main trends.

Concerns regarding Trust and Authenticity:

The least positive of the review themes pointed to issues of authenticity with regard to the product or service being provided. The specific concerns included the claim that topical medications contained unreported steroid components, and skepticism regarding the qualifications of certain consultation staff members at the time of sales.

Side Effects and Reactions:

A few reviewers mentioned that symptoms were exacerbated with the beginning of treatment in the form of worsening itching or spread of the area, as well as skin irritation. It is worth noting that some of the reviewers mentioned this in connection with either the discontinuation or reduction of the dosage of the drugs. This corresponds to the data from the literature on the phenomenon of immune response associated with tapering of the treatment course with topical immunosuppressants (5).

CHAPTER 5: DISCUSSION

5.1 Interpretation of Overall Satisfaction

Satisfaction scores from the headlines look quite promising. With the average score of 4.68 out of 5 and 93.6% of positive reviews, it is safe to conclude that the majority of patients who have left their reviews about Kayakalp Global are satisfied with the services received. Perceived treatment effectiveness or patients' perception that the treatment really worked was the most frequently mentioned topic and the main driver of the positive reviews. It seems to fit in well with what is usually observed in the Indian Ayurvedic satisfaction literature: the higher perception of treatment effectiveness, the higher patient satisfaction (9,10).

However, it should be kept in mind that some reservations are needed regarding the figures above. As any online review is voluntarily submitted, people with strong opinions (positive or negative) are more likely to write their reviews than those whose experience is neither extremely positive nor extremely negative. The huge difference between 1-star reviews (4.2%) and 2-star reviews (0.5%) speaks for itself: dissatisfied patients are likely to choose the most extreme option instead of going for an average one. Thus, 4.68 average score and 93.6% of positive reviews reflect reviewers' attitudes, but not satisfaction of all patients treated by Kayakalp Global.

5.2 Treatment Effectiveness and Long-Term Compliance Risk

Among the practical implications of this research are the 3-month time interval when patients spontaneously mentioned the appearance of visual improvement. The 3-month interval is the most frequently occurring one (31.7% of 654 timeline mentions) and is also the median of the timeline distribution, besides being derived from patient self-reports, not in answer to a direct question regarding this issue.

It perfectly fits the information provided by the clinical literature on adherence risks in psoriasis and vitiligo cases. The adherence begins to decrease relatively early during treatment and often occurs in a few weeks (5). The time interval preceding visible effects is especially critical for patients' engagement in treatment because it is at this stage when patients are the most likely to break off from therapy. In Kayakalp Global, this critical period seems to last for months 1 through 3. If the patient stopped taking drugs after six

weeks of treatment without any skin changes, he/she could never become a reviewer in our sample.

The implication for the organisation is specific: months 1 through 3 need more intensive support, not less. The WHO adherence framework identifies healthcare-system factors — proactive follow-up, counselling, and structured check-ins — as among the most modifiable levers available to a provider (1,2,7). Structuring that support around the slow-response adherence window is the most direct evidence-based response this study can offer.

5.3 Follow-up, Cost, and Trust: The Organisational Risk Profile

Costs and Sales Pressures, Trust and Authenticity, Side Effects, and Non-Compliance/Follow-Up Failure are the four themes which are significantly skewed towards the negative side. The four have one thing in common – their roots are more organizational rather than clinical in nature. They describe the way the service was communicated rather than the actual efficacy of the treatment protocol employed by the clinic.

The theme of Costs and Sales Pressures is skewed by 8.2. In contrast with what might be expected, the reviewers in this category are not complaining about costs but about the communication process they find coercive or obscure. The process of being asked to pay before getting all the information about the procedure done is a particular source of discontent which erodes trust.

The Trust and Authenticity theme (5.2 negative skew) reveals a particular concern. When patients question the absence of steroid content in the topical products used by the clinics or the credentials of consultants they deal with, they are not complaining about the quality of service but about the legitimacy of the procedures.

The follow-up failure pattern is particularly instructive because it directly maps onto the WHO healthcare-system dimension and onto the intervention literature. Svendsen et al. (2021) showed that structured, consistent follow-up improves adherence (7). The review data shows that when follow-up was promised and not delivered — specifically after payment — it produced the strongest negative reactions. The contrast between pre-payment and post-payment responsiveness that reviewers described is a structural compliance risk, not a one-off service failure.

Doctor and Staff Communication is the one theme that appeared at similar rates in both positive and negative reviews, which initially looks like a neutral finding. But the

qualitative content tells a different story. In positive reviews, communication was described as warm, patient, and informative. In negative reviews, it was described as rushed, hard to reach, or focused on sales. The theme frequency is similar; the experience it represents is opposite.

5.4 Comparison with the Wider Literature

The results obtained through the study are quite compatible with the existing body of literature on adherence and integrative health care. Specifically, the high degree of initial patient satisfaction is consistent with the data obtained by Hazra et al. (2025) and Gupta (2025) in their studies of Indian Ayurvedic care environments (9,10). The slow response time corresponds to the psoriasis and vitiligo compliance literature (4,5,6). Follow-up failure and distrust as factors of poor patient compliance correlate well with the corresponding healthcare-system element of the WHO framework (1,2). Finally, the use of GMB reviews as a predictor of the quality of services provided is validated by Zhang et al. (2025) and Aunimo and Romero Ternero (2025) (11,12).

What this study brings new to the literature base is the application of this methodology to an integrative Indian Ayurveda-Allopathy provider environment. Also, the multilingual Hindi/Hinglish corpus of texts requires the use of this particular approach rather than the standard sentiment models.

5.5 Strengths and Limitations

The key strengths of this research include the large number and naturally occurring nature of data (3,094 reviews with text), the clarity and replicability of the coding scheme based on the WHO compliance model, and the practical relevance of the analysis for organisation-based insights.

The weaknesses of this research are also obvious. GMB reviews are voluntarily provided and cannot speak for the patients that did not leave any reviews – arguably the most important group. The keyword scheme may miss some nuances. The research is also merely observational; therefore, it is only able to identify correlations rather than causation. Further studies involving primary data gathering or control experiments are required to investigate causation.

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

6.1 Summary of Findings

The analysis of 3,821 GMB reviews of Kayakalp Global was done to study patient satisfaction and compliance-related trends from the patient reviews. Here are the key insights of this study.

The overall level of satisfaction is very high — average rating of 4.68 and 93.6% of reviews being 4 or 5 star rated. Effectiveness of treatment is the leading positive topic, mentioned in 54.8% of reviews with text and what patients mostly want to discuss if they were satisfied with their visit.

The most common topics among dissatisfied patients (n=148) were related to cost of the product and associated sales pressure (8.2 times more frequent in negative reviews), trust and authenticity of the company (5.2 times), side effects (5.6 times), and lack of follow-up after payment (1.3 times).

Another interesting finding was that the period of 3 months became a natural milestone for patients — median duration of getting the results of treatment, spontaneously mentioned by 654 patients. This period coincides with the highest risk of treatment discontinuation found in the literature on adherence.

Doctor and staff communication appeared equally in positive and negative reviews, but for opposite reasons: as a strength in satisfied reviews and a source of frustration in dissatisfied ones.

6.2 Conclusion

The success and compliance of patient care at Kayakalp Global not only depend on how effective the treatment itself is, but on the organization's ability to manage the patient experience from beginning to end of the process. The treatment plan itself might be well-structured; it is what happens downstream — with follow-ups, cost communication, and pre-adherence patient education — that fails.

This is a fixable situation. It doesn't need any adjustments to the treatment protocol. What it needs are service design changes – namely structured follow-up and cost communication up-front as part of an agreed process, and patient education before the most vulnerable adherence period ends.

6.3 Recommendations

Based on the findings, the following seven recommendations are proposed for Kayakalp Global:

1. Further Improve Follow-Up During Early Stages

- Add a time-specific follow-up programme that entails confirmed appointments at 2nd week, 6th week, and 12th week – both pre- and post-payment of services.
- Keep patients in touch via calls or reminders or use WhatsApp for that purpose to cover the crucial period of first three months.

2. Better Manage Expectations During Onboarding

- During the very first visit, inform clients of the timeline of treatment, as well as what a partial improvement should be at 6-8 weeks before it reaches the mark of 3 months.
- Specify the biological reasons for a late response to the treatment for vitiligo and psoriasis as patients will know how it works.

3. Improve Pricing and Payment Process

- Inform clients about prices via an email containing detailed list of services to be provided and their prices – from medicine treatment plans to bill and insurance procedures.
- Make an SLA about prescription documents for insurance purposes. prescription documents needed for insurance reimbursement claims.

4. Standardise Ingredient Disclosure for Topical Products

- Proactively disclose the full composition of topical formulations, including any steroidal components, in patient-facing materials.
- Create a clear escalation channel for patients who experience or suspect adverse reactions, so they can seek guidance rather than self-adjusting dosage.

5. Formalise Dietary Compliance Support

- Retain and expand the dietitian touchpoint model — which patients explicitly valued in positive reviews.
- Supplement in-person or phone guidance with a lightweight digital adherence prompt (e.g., a weekly WhatsApp diet check-in) given the daily nature of Pathya-Apathya compliance.

6. Develop a Continuous Patient Feedback System

- Re-run the thematic coding framework used in this study as a quarterly internal dashboard on the live GMB review corpus, to track whether the cost/trust/follow-up gap narrows after operational changes are made.
- Integrate GMB review signals into the organisation's quality improvement cycle.

7. Leverage Digital Health Tools for Adherence

- Explore mobile app reminders, automated teleconsultation nudges, and digital diary tools to support patient self-monitoring through the slow-response phase of treatment.

Table 6.1: Recommendations Mapped to the WHO Adherence Framework

WHO Dimension	Recommendation	Rationale (linked finding)
Healthcare-system-related	Structured, calendarised follow-up at weeks 2, 6, and 12 — identical pre- and post-payment	Compliance & Follow-Up Support emerges at 1.3x frequency in negative reviews; all instances revolve around breaking of the promise of follow-up communication (Section 4.6).
Healthcare-system / Socioeconomic	Written, itemised cost summary before payment; SLA for insurance prescription documents	Cost & Sales Pressure appears at 8.2x frequency in negative reviews; all cases relate to transparency prior to payment and accountability after (Section 4.6).
Therapy-related	Patient education touchpoint at 6-8 weeks explaining biological timeline to repigmentation/clearance	The median patient reported timeframe until visible results is 3 months; this is the most vulnerable adherence period (Sections 4.5, 5.2).

WHO Dimension	Recommendation	Rationale (linked finding)
Therapy-related	Standardise and disclose composition of topical formulations; clear adverse-event escalation channel	Trust & Authenticity (5.2x) and Side Effects (5.6x) are markedly elevated in negative reviews (Section 4.6).
Patient-related	Formalise dietitian touchpoint and add lightweight digital diet-compliance check-in	Dietary adherence is another aspect of the Ayurvedic treatment modality; dietary compliance is mentioned positively in satisfied reviews (Section 2.3).
Monitoring / Continuous improvement	Quarterly re-run of thematic coding framework on new GMB reviews as an internal dashboard	Shows a cheap and scalable adherence monitoring technique proven by this study (Section 2.6).

6.4 Scope for Future Research

Three paths for further research are opened by this study. First, a prospective primary data study involving application of either WHO Adherence Questionnaire or dermatology quality of life instrument to a cohort of Kayakalp Global patients during 12 months will enable causal testing of the associations found and inclusion of the drop-out population which is automatically filtered out from GMB data.

Second, a longitudinal follow-up of this methodology through comparison of the frequencies of themes prior to and subsequent to the interventions proposed in section 6.3 will help the organization assess whether such interventions have made any impact on the indicators of compliance risks established in this research.

Third, using this methodology in other Indian integrative dermatology or AYUSH providers through comparative research can determine whether the cost/trust/follow-up dynamic revealed here is particular to the provider Kayakalp Global or whether it is a more generalized problem for Indian integrative medicine practice.

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ANNEXURES

Annexure I: Data Source and Extraction Note

The review data was harvested from the publicly available Google My Business page of Kayakalp Global via an automated Google Map review scraping application in June 2026. The unfiltered download included 3,827 reviews with four fields per review (reviewer display name, star rating, review text, and review date). The data was saved in structured .xlsx format and analyzed with Python through the use of the pandas and matplotlib packages. There are no reproductions of identifying data from reviewers in this report; all sample excerpts in Section 4.6 have been anonymized.

Annexure II: Thematic Coding Scheme — Full Keyword Dictionary

The Table A.1 below contains the entire keyword dictionary for the seven thematic codes, including English, Hindi, and Hinglish keywords and phrases. A review was coded positively for a theme if any of the keywords associated with the theme were found in the text of the cleaned review in lowercase form (i.e., case insensitive, substring).

Table A.1: Full Keyword Dictionary by Theme

Theme	Keywords / Phrases
Treatment Effectiveness / Visible Results	result, improve, improvement, recover, better, cured, heal, repigment, theek, thik, aaram, rahat, farak, sudhar, behtar, asar, faida, satisfied, no result, no improvement, no relief, koi farak nahi, koi fayda nahi, kuch nahi hua, waste, useless
Doctor/Staff Communication & Empathy	doctor, dietitian, dr., caring, polite, listen, explain, behaviour, rude, misbehave, consultation, dietician, staff, counsellor, guided, guidance, patience, baat, samjhaya
Compliance & Follow-up Support	follow up, follow-up, every 15 days, every fifteen days, reminder, no call, not receive, do not pick, do not respond, stopped calling, regular call, periodic call, diet plan, diet chart, pathya, parhez, lifestyle, routine, consistency, continue, daily, niyamit, adherence
Cost, Sales Pressure & Value	expensive, costly, price, cost, paisa, mehenga, sasta, affordable, overpriced, sale, sales pressure, force, forcing, compel, pressure to buy, buy medicine, insurance, bill, payment, refund, scam, fraud, loot, rupaye, package, emi
Trust & Authenticity Concerns	fake doctor, fake medicine, fake staff, genuine, trust, authentic, duplicate, scam, fraud, cheat, dhoka, jhooth, lie, marketing, gimmick, agent
Side Effects / Adverse Reaction	side effect, rash, burning, irritation, allergy, worse, bigad, badh gaya, increase, spread, phail, reaction
Advocacy / Recommendation	recommend, referred, refer, thankful, thank you, thanks, grateful, best hospital, best clinic, best doctor, highly recommend, suggest to all, suggest everyone, dhanyawad, shukriya

Annexure III: Research Ethics and Plagiarism Compliance Statement

The present dissertation is wholly reliant on the use of secondary data sourced voluntarily from patient reviews and made public. There was no patient interaction or interventions of any kind as well as any access to health information in any form during the entire research process. Patient reviewer identification details have been kept away from reproducing anywhere in this dissertation. In-text citation in Vancouver style along with the bibliography has been provided for all the sources utilized for the purpose of this dissertation. The data analysis done as part of Chapter 4 has been carried out independently by the researcher using the dataset provided in Annexure I.