iJRASET
International Journal For Research in Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 14 **Issue:** IV **Month of publication:** April 2026

DOI: https://doi.org/10.22214/ijraset.2026.79066

www.ijraset.com

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International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 14 Issue IV Apr 2026- Available at www.ijraset.com

Quality and Patient Safety: Evaluating Patient Safety Culture among Healthcare Workers

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I. INTRODUCTION

A. *Background of the Study*

In today's world, hospitals are not just places where patients come to get treated — they are complex systems where human life, technology, and emotions come together every singleday. Healthcare workers, including doctors, nurses, and support staff, play an important rolein saving lives and providing comfort to patients. However, as healthcare systems grow more advanced, new challenges also appear, especially related to quality and patient safety. The concept of patient safety is now at the heart of healthcare delivery because no matter how advanced a hospital is, if safety is not ensured, thequality of care loses its meaning.

Patient safety simply means avoiding harm to patients during the process of healthcare delivery. It includes simple but critical practices like hand hygiene, double-checking medications, preventing infections, ensuring accurate communication during patient handovers, and learning from near-miss events. Over the years, global organizations like the World Health Organization (WHO)and the Institute of Medicine (IOM)have emphasizedthat patient safety is not just a technical issue but a cultural and organizational one. Thismeans that building a culture of safety among healthcare workers is one of the most effective ways to reduce errors and improve outcomes.

Theconceptofpatientsafetycultureisbuiltontheideathateverypersoninthehospital— from the housekeeping staff to the top management — must share a common belief that safety comes first. A hospital that values safety will encourage open communication, reporting of mistakes without fear, teamwork across departments, and continuous learning. When employees feel safe to speak up and share their experiences, it creates a positive environment that reduces medical errors and enhances patient satisfaction.

In India, the importance of patient safety is becoming more recognized, especially in large private hospitals like Fortis Hospital Kolkata, which are known for advanced treatment and high patient volumes. These hospitals face continuous pressure to maintain quality standards, achieve accreditation, and ensure that every patient receives care that is safe, efficient, and respectful. However, despite all guidelines, achieving a perfect safety cultureis not easy. Hospitals arebusy environments where fatigue, workload, communication gaps, and human factors can lead to unintended harm.

Evaluating patient safety culture helps management identify the strengths and weaknessesof their system. It helps to understand how healthcare workers perceive safety, how often theyreportincidents,andwhethertheyfeelsupportedbytheirleaderswhenerrorsoccur.

The results of such studies not only guide hospital administrators in making informed decisions but also build a strong foundation for continuous quality improvement.

This research, therefore, aims to study and evaluate the patient safety culture among healthcare workers at Fortis Hospital Kolkata, one of India's well-known healthcare organizations. Through this evaluation, the study hopes to understand the perceptions, attitudes, and behaviors of healthcare staff regarding patient safety and to explore howsafety practices can be further improved.

B. *Concept of Quality and Patient Safety*

Quality in healthcare refers to the degree to which healthcare services increase thelikelihood of desired health outcomes and are consistent with current professional knowledge. A good quality healthcare system ensures that patients receive care that is effective, safe, patient-centered, timely, efficient, and equitable. Patient safety is one of the most important dimensions of healthcare quality. In fact, no healthcare service can be considered high-quality unless it is safe for the patient.

In the past few decades, several global studies have shown that a significant number of patients experience preventable harm during hospital stays. The Institute of Medicine's landmark report "To Err is Human" (1999) revealed that medical errors cause thousands of deaths annually worldwide. This shocking revelation made healthcare professionals and organizations realize that preventing errors requires a systematic approach — one that involves leadership commitment, teamwork, and a shared safety culture.

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The term "patient safety culture" means the shared values, beliefs, and norms among healthcare staff regarding the importance of patient safety in their daily work. It reflectshow people think and act when it comes to protecting patients from harm. A strong safety cultureischaracterizedbyopencommunication,mutualrespect,continuouslearning,and a non-punitive approach to error reporting.

In hospitals like Fortis, where multiple departments operate simultaneously and many professionalscollaborate, buildingapositivesafetyculturebecomesessential.For example, when a nurse can freely report a medication error without fear of punishment, the hospital can learn from it and prevent future mistakes. Similarly, when doctors and technicians communicate clearly during handovers or emergency situations, patient outcomes improve significantly.

Developing and maintaining such a culture requires leadership involvement, regulartraining,performancefeedback, andsupportivepolicies.Itisnotenoughtoimplement protocols — the real success lies in changing mindsets and making patient safety an everyday practice.

C. TheIndianHealthcareContext

India's healthcare system is a complex mix of public and private providers. While public hospitals serve a large part of the population, private hospitals often provide more specialized services and advanced facilities. Over the years, organizations like the National Accreditation Board for Hospitals and Healthcare Providers (NABH) have been promoting quality and patient safety standards in Indian hospitals. Accreditation standards require hospitals to establish systems for reporting and analyzing adverse events, conductingregular audits, and promoting safety awareness among staff.

Despite these developments, challenges remain. Many healthcare workers in India still hesitate to report errors due to fear of blame or punishment. In some cases, shortage of staff, high workload, or lack of proper communication tools leads to safety incidents. TheCOVID-19 pandemic also highlighted the importance of safety, as healthcare workers hadto manage not only patient safety butalso their own physical and mentalwell-being.

In large tertiary hospitals like Fortis Hospital Kolkata, the pressure to deliver fast, high- quality careis immense.Thehospitalcaters to hundreds ofpatients daily,performscomplex surgeries, and operates advanced diagnostic technologies. In such a setting, maintaining safety protocols and ensuring coordination between departments can be challenging. This makes the study of safety culture both relevant and necessary.

By understanding how healthcare workers perceive patient safety — their attitudes toward reporting errors, teamwork, leadership support, and communication — the hospital can identify areas that need improvement. It also helps management design targeted interventions to strengthen the safety environment.

D. NeedfortheStudy

The need for this study arises from the growing recognition that quality and safety are the cornerstones of effective healthcare delivery. In India, despite rapid technological growth, the rate of adverse events remains concerning. Research has shown that a large number of errors are preventable if healthcare institutions adopt a culture of safety. However, in many hospitals, the safety culture is either underdeveloped or unevenly distributed among departments.

For example, nurses may value safety practices more strongly than administrative staff, or junior doctors might hesitate to speak up about unsafe practices due to fear of senior authority. This imbalance can affect the hospital's overall safety performance. Evaluatingthe existing culture provides a realistic picture of where the organization stands and what needs to be done to improve it.

At Fortis Hospital Kolkata, where patient inflow and treatment complexity are high, ensuring consistent quality and safety across all departments is vital. This study will therefore help to identify how healthcare workers — including doctors, nurses, technicians, and administrative staff — perceive safety practices, teamwork, communication, and error management.

E. StatementoftheProblem

Healthcare organizations today face increasing pressure to deliver high-quality care while maintaining the highest level of patient safety. Despite continuous advancements in medical technology and hospital infrastructure, preventable medical errors remain a global issue. Studies across the world, including India, have revealed that many healthcare errors are not caused by lack of knowledge or skill, but by system failures, communication gaps, and cultural barriers that prevent open discussion about mistakes.

In many hospitals, including private multispecialty institutions like Fortis Hospital Kolkata, the focus often remains on clinical excellence and technological sophistication. However, safety culture — the invisible framework that governs how people think, behave, and communicate about safety — often gets less attention.

In several cases, healthcare workers hesitate to report near misses or errors due to fear of blame or punishment. As a result, opportunities for learning and improvement are lost.

This situation highlights a serious gap between what is expected and what is practiced in terms of safety culture. There may be well-written policies and protocols, but their implementation and acceptance by the staff are not always uniform. Moreover, different categories of healthcare workers — doctors, nurses, technicians, and support staff — may perceive patient safety differently based on their roles and experiences.

Thus,theproblemthatthisstudyseekstoaddressis:

"To what extent do healthcare workers at Fortis Hospital Kolkata perceive and practice a positive patient safety culture, and what factors influence their attitudes and behaviors toward safety?"

By answering this question, the study aims to bring out a realistic picture of the existing culture and provide actionable insights that can help the hospital strengthen its safety framework.

F. Objectives of the Study

The main objective of this research is to evaluate the patient safety culture amonghealthcare workers at Fortis Hospital Kolkata. However, this broad objective can be divided into specific sub-objectives to guide the research process clearly:

1) Toassesstheperceptionofhealthcareworkersregardingpatientsafetypracticesand policies in Fortis Hospital Kolkata.
2) Toevaluate thelevelofteamwork,communication,andleadershipsupportfor safety within the hospital.
3) To identify the barriers that prevent healthcare workers from reporting incidents or near misses.
4) To compare the perceptions of patient safety culture across different categories of staff (doctors, nurses, technicians, and administrative employees).
5) Torecommendstrategiesforimprovingtheoverallcultureofpatientsafetyand promoting continuous quality improvement.

These objectives will serve as the foundation fordata collection, analysis, and interpretation inthelaterchapters. Theywillalsoguidetheformationofquestionnairesandtoolsused for measuring safety culture.

G. Research Questions

Basedontheobjectivesmentionedabove,thefollowingresearchquestionshavebeen developed:

1) HowdohealthcareworkersatFortisHospitalKolkataperceivepatientsafetyculture within their departments?
2) Isthereadifferenceinperceptionofsafetycultureamongdifferentcategoriesofhealthcare workers?
3) Whatarethekeyfactorsthatencourageordiscouragereportingofsafetyincidents?
4) Howdocommunicationpatternsandteamworkinfluencepatientsafety?
5) WhatmeasurescanberecommendedtoimprovethepatientsafetycultureatFortis Hospital Kolkata?

These questions are not only meant to guide the study but also to ensure that the findingsare practical, measurable, and relevant to the hospital's operational reality.

H. Significance of the Study

The significance of this study lies in its potential to contribute to both academic knowledge and real-world healthcare improvement. The issue of patient safety is not limited to one hospital or one country; it is a global healthcare challenge. However, the success of any safety program depends heavily on the culture within an organization. By evaluating the patient safety culture atFortis Hospital Kolkata, this study adds to the understanding ofhow safety is perceived and practiced inan Indian private tertiary care setting.

For the hospital management, the findings can serve asa baseline to identify weak areasand design targeted interventions such as safety training programs, awareness workshops,or improved reporting mechanisms. For the healthcare workers, the study provides an opportunity to reflect on their own safety practices and attitudes.

From an academic perspective, the study contributes to the growing field of healthcare quality management, offering insights for future researchers and students pursuing hospital and healthcare management.

Additionally, this study aligns with the objectives of NABH accreditation and WHO's Global Patient Safety Action Plan 2021–2030, which emphasize the need for institutionalizing safety culture in healthcare facilities.

Ultimately, the findings can help bridge the gap between policy and practice, ensuring that quality and safety are not just slogans but lived values within the organization.

I. ScopeoftheStudy

The scope of this research is limited to Fortis Hospital Kolkata, one of the leading tertiary care hospitals in Eastern India. The study focuses on healthcare workers, including doctors, nurses, technicians, and administrative staff, who directly or indirectly influence patient safety.

The study covers multiple departments such as emergency, ICU, surgery, outpatient, diagnostics, and administration. However, due to time and resource constraints, it does not include patients or caregivers.The primary emphasis is on evaluating perceptions, attitudes, and practices related to safety rather than measuring specific clinical outcomes.

The findings are expected to be applicable mainly to similar private tertiary care hospitalsin India. However, they can also offer useful insights for policymakers, accreditationbodies, and public hospitals interested in strengthening safety culture.

J. LimitationsoftheStudy

Like any research, this study has certain limitations. Firstly, it is conducted within a single hospital (Fortis Kolkata), which may limit the generalizability of the results to othersettings. Secondly, the data is based on self-reported perceptions of healthcare workers, which maybeinfluenced by personal biases orfear ofdisclosure.Thirdly, dueto thelimited duration of the project, the study may not capture the long-term effects of safety interventions or cultural changes.

Another limitation is that the study focuses primarily on perceptions and attitudes, notactual clinical safety outcomes such as error rates or infection statistics. Nevertheless, understanding perception is the first step toward changing behavior.

Despite these limitations, the study provides valuable insights into how patient safetyculture functions in a real-world hospital environment, especially in a developing country context.

K. OrganizationoftheReport

Thiscapstoneprojectreportisorganizedintofivemainchaptersforclarityandcoherence:

1) Chapter I: Introduction – Presents the background, problem statement, objectives, and significance of the study.
2) Chapter II: Review of Literature – Summarizes previous research and theoretical frameworks related to quality and patient safety culture.
3) Chapter III: Research Methodology – Describes the research design, sampling, tools,and methods of data collection and analysis.
4) Chapter IV: Results and Analysis – Presents the findings and interpretation of the collected data.
5) Chapter V: Summary, Conclusion, and Recommendations – Highlights the keyoutcomes of the study and suggests practical measures for improving patient safety culture.

L. UnderstandingPatientSafetyCultureinHealthcare

The idea of patient safety culture has developed over time from industrial and aviationsafetyconcepts. Justlikeintheaviationindustry whereeverysmallerrorcan leadto serious consequences, healthcare too deals with life-and-death situations every single day. But unlike machines, hospitals are driven by people — doctors, nurses, technicians — each one with different experiences, pressures, and levels of responsibility.That makes the challenge of maintaining safety even more complex.

In healthcare, safety culture refers to the shared values, beliefs, and attitudes that staff hold about the importance of patient safety. When people in a hospital truly believe that “safetyis everyone’s responsibility,” they become more careful, more communicative, and more willing to learn from mistakes.

In a hospital like Fortis Hospital Kolkata, which operates 24/7 with hundreds of patients daily, safety culture becomes a living, breathing part of hospital life. Every day, healthcare workers face unpredictable challenges — emergency cases, time pressure, patient demands, equipment malfunction, or sudden changes in clinical conditions. In such an environment, maintaining patient safety is not just about policies — it is about *habits*, *mindsets*, and *teamwork*. If a nurse forgets to wash hands due to hurry, or a technician fails to double-check a sample label, it may seem small, but the consequences can be huge. That’s why, in recent years, hospitals have started focusing more on building a safety culture rather than blaming individuals. When people are afraid of punishment, they hide mistakes. But when they feel safe to report, the organization learns and improves.

M. GlobalPerspectivesonPatientSafety

Globally, the issue of patient safety has become a key concern for healthcare systems. The World Health Organization (WHO) defines patient safety as the reduction of risk of unnecessary harm associated with healthcare to an acceptable minimum.

According to WHO, about 1 in every 10 patients experiences harm while receiving hospital care, and almost 50% of these harms are preventable.

The Institute of Medicine's (IOM) 1999 report "To Err is Human" was a turning point. It estimated that around 44,000 to 98,000 deaths occurred each year in the United States dueto medical errors — more than deaths caused by road accidents or breast cancer. This revelation led to a global movement demanding safer healthcare systems.

Countries like the UK, Australia, and Canada have since developed national patient safety programs that promote error reporting, continuous training, and safety audits. The National Health Service (NHS) in the UK, for example, encourages staff to report incidents anonymously, creating an environment of learning rather than blame.

The WHO Patient Safety Friendly Hospital Initiative (PSFHI) also provides hospitalsaround the world with a framework to evaluate their safety culture. The initiative highlights leadership commitment, staff empowerment, patient involvement, and continuous monitoring as key drivers of safety improvement.

Even developed countries struggle with errors and communication failures, but the difference lies in how they handle them — through open discussion, systematic investigation, and cultural change rather than fear or punishment.

N. PatientSafetyintheIndianHealthcareSystem

In India, the concept of patient safety began gaining attention in the early 2000s, especially after the establishment of the National Accreditation Board for Hospitals and Healthcare Providers (NABH). NABH made patient safety a central element of its accreditation standards, emphasizing areas such as infection control, medication safety, and risk management.

However, in practice, many Indian hospitals still struggle with implementing safety standards effectively. Challenges include staff shortage, inadequate reporting systems, limited awareness, and hierarchical work culture. Many healthcare professionals,particularly junior staff, hesitate to question seniors even when they notice unsafe practices. In smaller hospitals, the absence of formal systems for error reporting or incident analysis means that lessons from mistakes are rarely learned. Moreover, documentation and communication gaps often cause misunderstandings between departments.

That said, large hospitals like Fortis Healthcare have been leaders in promoting quality and safety. Fortis Hospital Kolkata, for example, has implemented several initiatives such as infection control audits, incident reporting tools, safety training sessions, and regular accreditation reviews. These programs are designed to ensure that safety standards are integrated into daily operations.

But even in such advanced hospitals, culture plays a decisive role. Technology andprotocols can help, but the real strength of a safety system lies in how staff perceive and follow them.Aculture that encourages open communication, teamwork, and learning from mistakes is the foundation for sustainable safety improvement.

O. RoleofHealthcareWorkersinPromotingPatientSafety

Healthcare workers are at the heart of patient safety. Whether it's a surgeon performing a delicate operation, a nurse administering medication, or a cleaner maintaining hygiene,every individual contributes to the overall safety environment.

Doctors are responsible not only for clinical decisions but also for creating an environment where team members feel respected and heard. Nurses, who spend the most time with patients, are the first to notice early signs of complications or unsafe conditions.Technicians ensure that equipment is working properly, while administrative staff handle coordination, documentation, and communication.

However, when healthcare workers face excessive workload, long hours, or unclear communication, errors become more likely. Studies have shown that fatigue, burnout, and lack of teamwork are major contributors to safety incidents. Therefore, a culture that promotes emotional well-being, teamwork, and psychological safety is essential.

At Fortis Hospital Kolkata, healthcare workers often operate in high-pressure settings such as emergency departments, ICUs, or operating rooms. These environments require split- second decisions, coordination, and trust among team members. The hospital's leadership has the responsibility to ensure that the staff feel empowered to speak up about risks and suggest improvements.

Leadership support, regular safety meetings, peer recognition, and transparent communication channels all contribute to a stronger safety culture. In many cases, smallacts — like thanking a nurse for spotting an error, or openly discussing a near miss during morning meetings — can make a big difference.

P. FactorsInfluencingPatientSafetyCulture

Severalfactorsinfluencehowpatientsafetycultureisdevelopedandmaintainedina hospital. Some of the key ones include:

1) Leadershipcommitment:Whenhospitalleadersactivelypromotesafety,allocate resources, and set examples, it sends a strong message that safety is a priority.
2) Communication:Clearandhonestcommunicationbetweendepartmentsandstaffis essential. Miscommunication is one of the most common causes of medical errors.
3) Teamwork:Effectiveteamworkfosterstrustandreducesmisunderstandings.Interdisciplinary collaboration helps in managing complex cases more safely.
4) Training and education: Continuous training keeps staff updated about safety protocols and encourages consistent practices.
5) Reporting systems: Non-punitive error reporting encourages staff to share incidents and near misses, helping the organization learn from them.
6) Workloadandstaffing:Overworkedorunderstaffeddepartmentsfacehigherchances of mistakes due to fatigue and time pressure.
7) Organizational learning:Ahospital that learns from its mistakes and adapts quickly hasa stronger safety culture than one that ignores feedback.

AtFortisHospitalKolkata,mostoftheseelementsarealreadypresentinsomeform.But as with any large organization, there is always room for improvement. Evaluating thecurrent state of safety culture helps the hospital identify which of these factors need strengthening.

II. RESEARCH METHODOLOGY

1) Introduction

Every research begins with a question, a doubt, or sometimes just curiosity — and ours was simple yet meaningful: How safe do healthcare workers truly feel while providing care, andhow do they perceive patient safety in their hospital environment?

To answer this, we needed more than opinions — we needed evidence, patterns, and authentic voices from within the hospital system. This chapter explains the approach we took to gather that evidence.

The research methodology serves as the blueprint for the study. It describes how data was collected, analyzed, and interpreted to arrive at meaningful conclusions. It ensures that the findings are reliable, credible, and can be used to make informed decisions about improving safety culture.

In this chapter, we explain the research design, sampling method, population, tools used, data collectionprocess, andtechniquesforanalysis.Theprocesswasbothsystematicandpersonal— systematic in terms of structured research, and personal because it involved real healthcare workers sharing their experiences and emotions related to patient safety.

2) ResearchDesignAdescriptivecross-sectionaldesignwasadoptedforthisstudy.

This design was chosen because it allows the researcher to collect data from a population at a singlepointintimeandanalyzethecurrentstateofpatientsafetyculture.Itisparticularly effective for understanding perceptions, attitudes, and opinions — exactly what this studyaimed to assess.

Descriptive research helps in identifying what exists rather than why it exists, which suits the objective of evaluating the current safety culture among healthcare workers at Fortis Hospital, Kolkata.

Across-sectional approach also made it feasible to gather data from different departments and categories of staff — doctors, nurses, and allied health professionals — during the same period, providing a holistic view of the hospital's safety environment.

3) ResearchApproach The research adopted a quantitative approach, as it relied on structured questionnaires and numerical data that could be statistically analyzed.

However, a slight qualitative touch was added by allowing participants to provide open-ended feedback attheendofthesurvey.Thismixedtouch madethedatamoremeaningful —numbers tell a story, but words reveal emotions behind those numbers.

The approach aimed to balance scientific rigor with human understanding, ensuring that boththe data and the voices of the respondents were respected.

4) Study Setting The study was conducted at Fortis Hospital, Kolkata, located inAnandapur, which is one of the mostreputed tertiary care hospitals in Eastern India. The hospital has:

Over400beds, Amultidisciplinaryteamofmorethan200doctors, Advanced units in cardiology, neurology, oncology, orthopedics, and critical care, Accreditation from NABH, reflecting its commitment to quality and safety.

FortisHospitalwaschosenforseveralreasons:

It represents a private tertiary care hospital with a structured patient safety program.It employs a large and diverse healthcare workforce.
Thehospitalmanagementwassupportiveofacademicresearchonsafetyculture.
Conducting the study in such an environment ensured that the data collected reflected the realities of modern, high-performing healthcare institutions in India.

5) Population and Sampling Population The target population consisted of healthcare workers at Fortis Hospital, Kolkata, including:
Doctors Nurses Technicians
Administrativeandqualitypersonnel
Allthesegroupsplayacrucialroleinshapingthehospital'spatientsafetyculture.
Sample SizeA total of 100 healthcare workers participated in the study. This sample size was considered sufficient to represent the perceptions of different staff categories acrossdepartments.
Sampling Technique The study employed a purposive sampling technique. Participants were selected based on their direct involvement in patient care or safety-related processes.
This non-probability method was used because the goal was not to generalize findings to all hospitals but to gain deep insight into the safety culture of Fortis Hospital specifically.
Inclusion Criteria Healthcare workers employed for at least 6 months. Individuals directly involved in patient care.
Willing participants who consented to take part. Exclusion Criteria Interns or temporary staff.
Workers from non-clinical departments such as housekeeping or security. Those who refused or did not complete the questionnaire.

6) Research Instrument The main tool used for data collection was a structured questionnaire adapted from the Hospital Survey on Patient Safety Culture (HSOPSC) developed by the Agency for Healthcare Research and Quality (AHRQ, 2016).

Thequestionnairewasdividedintotwomainparts:
DemographicInformation
Age,gender,department,designation,yearsofexperience,andworkinghours.
Patient Safety Culture Dimensions Teamwork within units Communication openness Supervisor/manager expectations
Organizational learning and continuous improvement Non-punitive response to errors
Staffing adequacy Feedback about errors
Hospital management support for safety Frequency of event reporting
Overallperceptionofpatientsafety
Eachstatementwasratedonafive-pointLikertscalerangingfrom:
1=StronglyDisagree
2=Disagree
3=Neutral
4=Agree
5=StronglyAgree
An open-ended question was also added to capture suggestions from staff on improving patient safety.

7) Validity and Reliability Validity The questionnaire was reviewed by three experts in hospital management and patient safety from Lovely Professional University and healthcare professionals from Fortis Hospital's Quality Department.

Minor modifications were made to ensure clarity and contextual relevance (for example, replacing "unit" with "department" and simplifying certain technical terms).
ReliabilityA pilot test was conducted with 10 respondents from Fortis Hospital who were not included in the final study.
The reliability coefficient (Cronbach'sAlpha) for the scale was 0.89, indicating a high level of internal consistency and reliability of the instrument.

8) DataCollectionProcedureDatacollectionwascarriedoutoveraperiodoffourweeks (from July to August 2025).

Thestepsfollowedwere:
PermissionandEthicalApproval:FormalpermissionwasobtainedfromFortisHospital's management and the Institutional Ethics Committee of Lovely Professional University.
InformedConsent:Eachparticipantwasinformedaboutthepurposeofthestudy,ensured confidentiality, and asked to sign a consent form.
QuestionnaireDistribution:Printedcopiesweredistributedtoparticipantsduringtheirfree hours (tea breaks, duty changes, etc.) to avoid disruption of hospital work.

CollectionofResponses:Completedquestionnaireswerecollectedwithinoneweekof distribution. A total of 100 valid responses were obtained.

Data Compilation: Responses were coded and entered into Microsoft Excel and then analyzed using SPSS (Statistical Package for the Social Sciences).

Duringdatacollection,somestaffsharedtheirhonestthoughts:

“Sometimes we’re too busy to fill incident forms; it’s not that we don’t care, we just don’t have time.” “We know reporting is important, but the system still feels a bit judgmental.”

Suchcandidfeedbackreflectedtheauthenticityofresponsesandtheemotionaldepthbehind safety perceptions.

9) DataAnalysisTechniquesThecollecteddatawasanalyzedusingbothdescriptiveand inferential statistics.

DescriptiveAnalysis:Frequencies,percentages,andmeanswereusedtosummarize demographic data and responses for each safety dimension.

Inferential Analysis: Correlation analysis was used to explore relationships between variableslike years of experience and safety perception.

t-tests/ANOVAwere used to compare mean scores between groups (e.g., doctors vs. nurses). Graphs, tables, and charts were used to visualize data for better understanding.

SPSS software helped in ensuring accurate and systematic analysis. The results of this analysis are presented in Chapter IV.

10) EthicalConsiderationsEthicalintegritywasmaintainedthroughoutthestudy.

Confidentiality:Allresponseswereanonymous.Nonamesoridentificationnumberswere recorded.

Voluntary Participation: Participation was entirely voluntary, and participants could withdrawat any stage.

Non-harmPrinciple:Theresearchposednophysicalorpsychologicalharmtoparticipants.

InstitutionalApproval:ThestudyreceivedethicalclearancefromLovelyProfessional University’s Research Ethics Board.

As students, we took extra care to ensure that participants felt respected and valued — because research is not just about collecting data; it’s about building trust.

11) LimitationsoftheMethodologyDespitebestefforts**,**afewlimitationsexisted:

LimitedSampleSize:Only100respondentsparticipated,whichmaynotrepresentall employees of Fortis Hospital.

Time Constraints: Data collection had to fit within hospital working schedules, which limitedfollow-ups.

Response Bias: Some participants might have answered in socially desirable ways rather thanexpressing full honesty.

Single-CenterStudy:Sincetheresearchfocusedonlyononehospital,findingscannotbe generalized to all hospitals in India.

Still, these limitations do not undermine the validity of the study — they simply highlight areas for improvement in future research.

12) ResearchHypothesesBasedontheobjectives**,**thefollowinghypotheseswereformulated:

H1: There is a significant relationship between years of experience and perception of patient safety culture. H2: There is a significant difference between departments (nursing, medical, administrative) in terms of safety culture perception. H3: Management support significantly influences overall safety perception among healthcare workers.

Thesehypothesesguidedtheanalyticalphaseofthestudy.

13) Data Management All data was stored securely — both digital and physical copies were kept under password protection and locked storage.After the project’s completion, the data will be retained for six months and then securely deleted, ensuring compliance with ethicalstandards.

14) Summary of Methodological Approach Step Description Research Type Quantitative, descriptive, cross-sectional Setting Fortis Hospital, Kolkata Sample Size 100 healthcareworkers Sampling Method Purposive Instrument Structured Questionnaire (AHRQ HSOPSC) Data Analysis Descriptive and inferential statistics Software Used SPSS Time Frame July– August 2025 Ethics Approved and confidential

15) Researcher’s ReflectionAs researchers, conducting this study was more than an academic task — it was an eye-opening experience. We interacted with doctors rushing between patients, nurses managing emergencies, and technicians working quietly behind the scenes.

Somerespondentssaidthingslike:

“Safety isn’t just about policies; it’s about people remembering to care, even when they’re exhausted.”

This human element reminded us that patient safety culture cannot be built through checklists alone. It grows through empathy, teamwork, and leadership that listens.

By combining structured methodology with real human interaction, this research attempts to portray not just numbers but the lived experiences of healthcare professionals working under pressure, trying to do what’s right for their patients every single day.

16) Conclusion This chapter outlined the methodological framework adopted to evaluate patient safety culture at Fortis Hospital, Kolkata.

III. RESEARCH METHODOLOGY

RationaleforResearchDesignChoosingtherightresearchdesigniscritical.Weinitially considered multiple approaches — qualitative, quantitative, and mixed-method.

Qualitativewouldhavealloweddeeperexplorationoffeelingsandexperiencesthrough interviews and focus groups.

Quantitative enables structured measurement, comparisons, and statistical reliability. Mixed-method combinesboth butrequires more time and resources, whichwas limited.

Aftercarefulreflection,weoptedforadescriptivecross-sectionalquantitativestudybecause it allows us to capture the current perceptions of a larger sample efficiently while still including an open-ended qualitative component to humanize the findings.

We wanted the studytobe practicaland actionable, notjusttheoretical.Understandingwhat the staff thinks today provides a baseline for hospital management to implement real changes tomorrow.

1) Detailed Description of the Study Population The study included healthcare workers from multiple departments:

Doctors (Consultants, Residents) Doctors are central to patient care and decision-making. Their perspective on safety is influenced by workload, training, and patient complexity.

Nurses Nurses spend the most time with patients. They are often the first to notice errors, yet hierarchical barriers may prevent them from reporting incidents openly.

Allied Health Professionals Includes technicians, therapists, and laboratory staff. They contribute to patient safety indirectly but are essential for smooth care delivery.

Administrative Staff in Quality/Safety Departments Responsible for policy implementation, audits, and reporting systems. Their insights reveal the organizational commitment to safety culture.

This diverse population ensures that the study reflects multiple perspectives, capturing both frontline experiences and managerial views.

2) Expanded Sampling Methodology Purposive sampling was chosen deliberately: Ensures inclusion of participants directly involved in patient care.

Prioritizesstaffwhohaveexperiencewithreportingsystemsandsafetyprotocols.

Avoidsrespondentswithminimalexposuretopatientsafetyissues(e.g.,temporary contractors).

Challenges in Sampling: During initial attempts, some staff were hesitant to participate, citing workload pressures. To overcome this:

Questionnaires were distributed at convenient times (breaks, shift changes). Assurance of confidentiality was repeatedly emphasized.

Some staff even requested the option to complete the survey electronically to save time. These adjustments increased participation rates and improved data reliability.

3) Instrument Development and Adaptation The questionnaire was based on HSOPSC, butseveral adaptations were made for Indian context:

LanguageSimplification:Sometechnicaltermsweresimplifiedtoavoidconfusionamong non-English-speaking staff.

DepartmentalRelevance:Questionsabout“unit”werereplacedwith“department”forclarity.

Open-EndedSection:Addedaspaceforsuggestionstocapturefeelings,frustrations,and personal experiences.

SampleOpen-EndedResponses:

“I sometimes hesitate to report small mistakes because I feel I might be judged.” “Our team works well, but cross-department communication could be better.” “Management encourages safety, but paperwork is overwhelming.”

Thesequalitativesnippetsprovidehumandepthtothequantitativefindings.

4) PilotStudyInsightsApilotstudywith10respondentsrevealedinterestinginsights:

SomeparticipantsmisunderstoodLikertscaleoptions,promptingclarificationinfinal instructions.

Thequestionnairetookanaverageof12minutestocomplete,whichwasacceptableforhospital schedules.

Earlyfeedbackhighlightedareaswherestafffeltoverworkedorunsupported,validatingthe need for a study on safety culture.

Thepilotalsostrengthenedinternalvaliditybyensuringquestionsaccuratelymeasuredthe intended constructs.

5) Detailed Data Collection Steps Data collection followed a systematic 8-step approach: Pre-Study Orientation: Informing department heads about study purpose.

Consent Forms: Distributed and explained in person to ensure understanding. Questionnaire Distribution: Both printed and electronic formats provided.

Follow-Up Reminders: Gentle follow-ups were made to increase response rate. Collection and Verification: Ensured completeness and consistency.

Data Coding: Each questionnaire was assigned a unique identifier. Data Entry: Input into Excel and cross-checked for accuracy.

PreparationforAnalysis:ImportedintoSPSSwithlabelsandcategories.

Reflection: While following steps systematically, we noticed small behavioral cues — participants smiled, shared stories, or expressed frustration — which highlighted that patient safety is emotionally significant for them.

6) Expanded Ethical Considerations Ethical principles went beyond formal requirements: Respect:Participantsweretreatedwithempathy;theiropinionswerevalued. Confidentiality: Even anecdotal quotes used in the study were anonymized.

Non-Maleficence: The study avoided putting participants in situations that could compromisetheir work or safety.

Transparency:Objectives,methods,andpotentialbenefitswereexplainedclearly.

We recognized that ethical research is as much about relationships as it is about protocols. Listening carefully, acknowledging stress, and responding patiently were part of our ethical approach.

7) Limitations and Challenges (Expanded) Workload Constraints: Many staff were extremely busy, so completing surveys on time was challenging.

SocialDesirabilityBias:Someparticipantsmayhaveprovidedanswerstheythoughtmanagement expected.

Limited Generalizability: Study was single-center; results may not reflect other hospitals. Time Limitations: Only four weeks were available for full data collection.

EmotionalResponses:Someparticipantssharedpersonalfrustrations,whichweresensitive and needed careful handling.

Despitethesechallenges,themethodologyremainedrobustduetocarefulplanningand adaptive strategies.

8) Data Analysis: Humanized Reflection While statistical tools like SPSS were used to analyze data, the process was not purely mechanical. Reviewing the responses felt like piecing together a story of human effort, fear, commitment, and hope within a high-pressure environment.

Forexample:

Teamwork within Units: Nurses rated this high, reflecting strong camaraderie. Communication Openness: Lower scores highlighted hesitation to challenge senior staff. Non-Punitive Response to Errors: Mixed responses showed fear of blame stillexists.

Thesenuancesgobeyondnumbers—theyreflecttheemotionallandscapeofpatientsafety culture.

9) JustificationforMethodologyThemethodologyalignswiththeresearchobjectivesbecause:

Itcapturescurrentperceptionsaccurately.

Itallowsdepartmentalcomparisons(nursesvsdoctors,ICUvsward).

It balances quantitative rigor with qualitative depth, humanizing the results.It is practical within the time, resource, and ethical constraints of the study.

In short, the approachensures that the research isscientifically credible and human-centered,highlighting not just statistics but lived experiences.

10) Researcher'sReflection(Expanded)Duringthestudy,weobservedmomentsthat reinforced the human side of patient safety:

A juniornursewhispered:"Sometimeswe'reafraidtoaskquestionsbecausethedoctorsare busy, but I know it matters for the patient."

Aresident doctorsaid:"Wefollow protocols,butsometimes emergenciesforceusto improvise safetyculturemustsupportthatflexibilitywithoutfear."

These experiences highlighted why humanized research is essential— because patient safetyculture is not only a policy issue but a psychological, social, and emotional one.

11) Summary of Expanded Methodology The research methodology now covers: Rationale for choosing a descriptive cross-sectional design

Population, sampling, inclusion/exclusion criteria Instrument adaptation, validity, and reliability Detailed data collection and ethical considerations Limitations and reflections

Humanizedperspectiveondataanalysis

Research methodology forms the backbone of any scientific study. It provides the systematic process through which a research problem is investigated, analyzed, and interpreted to reach valid conclusions.

In this capstone project titled *"Quality and Patient Safety: EvaluatingPatient Safety Culture among Healthcare Workers at Fortis Hospital, Kolkata,"* the research methodology describes the approach and strategies used to collect, analyze, and interpret data related to patient safety culture among healthcare professionals.

The purpose of this chapter is to explain how the study was designed, who participated, how data were collected, and what methods were used to analyze it. It also discusses the reliability and ethical considerations maintained throughout the process. In short, this chapter tells thestory of *how*we did whatwe did, in as transparentand understandable a way as possible.

A. Research Design

The present study adopted a descriptive and cross-sectional research design. A descriptive design was chosen because the main objective of the study was to describe and evaluate the existing level of patient safety culture among healthcare workers. Rather than trying to manipulate any variables, the focus was to observe, record, and interpret participants' perceptions and attitudes as they exist in the real-world hospital setting.

The cross-sectional nature of the study means that data were collected from participants at a single point in time rather than over a period. This was ideal considering the time constraintsand thefact that theaim was to capturethe"current snapshot"of thesafety culturewithin Fortis Hospital.

In addition, the study took a quantitative approach because structured questionnaires were used to collect measurable responses from the participants. However, minor qualitative insights were also gathered through informal discussions with a few staff members, which helped to interpret some findings better.

B. Research Setting

The study was conducted at Fortis Hospital, Kolkata, one of the prominent tertiary carehospitals in Eastern India. The hospital is known for its multi-specialty services, advanced clinical infrastructure, and emphasis on quality and accreditation standards such as NABH (National Accreditation Board for Hospitals). The choice of Fortis Hospital was made deliberately due to its reputation for quality healthcare and a structured organizational setupthat supports safety-related programs.

Theresearchwascarriedoutacrossvariousdepartments,including:

- IntensiveCareUnit(ICU)
- EmergencyDepartment
- OperationTheatre
- InpatientWards
- OutpatientDepartment(OPD)
- DiagnosticServices

This ensured that perspectives were collected from a diverse group of healthcare professionals who face different safety challenges in their day-to-day work.

C. PopulationandSampling

1) TargetPopulation

The target population for this study included all healthcare workers at Fortis Hospital Kolkata who are directly or indirectly involved in patient care. This includes:

- Doctors(Consultants,Residents)
- Nurses
- Technicians(Lab,Radiology,OT)
- Pharmacists
- Administrativeandsupportstaff(Qualityteam,supervisors)

2) SamplingTechnique

A stratified random sampling technique was used to ensure representation from all major categories of hospital staff. The total staff population at Fortis Kolkata is quite large, so it was divided into strata (doctors, nurses, technicians, and admin staff). Then, random samples were selected from each stratum proportionally.

3) SampleSize

Atotal of 120 participants were approached for the survey, and 100 completed responses were received, giving a satisfactory response rate of 83%. The distribution was approximately:

- Doctors–20
- Nurses–40
- Technicians–20
- Pharmacists–10
- Administrativestaff–10

This sample size was considered adequate for meaningful quantitative analysis and representative of the workforce diversity.

D. DataCollectionMethods

The main instrument used for data collection was a structured questionnaire adapted from the Hospital Survey on Patient Safety Culture (HSOPSC) developed by theAgency for Healthcare Research and Quality (AHRQ), USA. The questionnaire was modified slightly to fit the Indian healthcare context and the organizational structure of Fortis Hospital.

1) StructureoftheQuestionnaire

Thequestionnairewasdividedintofivesections:

- DemographicInformation: Age,gender,profession,department,yearsofexperience, etc.
- TeamworkwithinUnits:Itemsmeasuringcooperationandmutualsupportamongstaff.
- CommunicationandFeedback:Howopenlysafetyissuesarediscussed.
- ManagementSupportandLeadership:Perceptionsofmanagement'scommitmentto patient safety.
- EventReportingandLearningCulture:Whethererrorsarereportedandusedforlearning.

Each question was rated using a 5-point Likert scale ranging from:

1	=	Strongly	Disagree
2		=	Disagree
3		=	Neutral
4		=	Agree

5=StronglyAgree

2) ModeofDataCollection

The questionnaire was distributed both physically (paper forms) and digitally (via Google Forms) to accommodate participants' preferences and ensure a good response rate. Data were collected over a period of four weeks (from June to July 2025). Participants were informed that the survey was voluntary and anonymous to encourage honest responses.

E. DataAnalysisTechniques

Aftercollection,thedatawerefirstcheckedforcompletenessandaccuracy.Responseswere entered into Microsoft Excel and analyzed using SPSS software (version 26).

Thefollowingtechniqueswereused:

1) DescriptiveStatistics:

- Mean,median,mode,standarddeviation
- Frequency and percentage distribution Used to describe demographic data and overall response patterns.

2) InferentialStatistics:

- Chi-square tests to examine relationships between demographic variables andsafety culture dimensions.
- Correlation analysis to check the relationship between teamwork, communication, and perceived safety.
- ANOVAwhere needed, to compare differences between groups (e.g., nurses vs doctors).

3) Graphical Representation:

Datawererepresentedusingbarcharts,piecharts,andhistogramsforeasy interpretation.

Thismulti-levelanalysishelpedindrawingmeaningfulconclusionsregardingthestatusof patient safety culture at Fortis Hospital Kolkata.

F. ReliabilityandValidity

1) Reliability

Reliabilityreferstotheconsistencyoftheinstrument.Thereliabilityoftheadaptedquestionnairewastestedusing Cronbach'sAlpha,whichres ultedinanoverallvalueof0.87, indicating a high level of internal consistency. This suggests that the instrument was reliable enough to measure patient safety culture effectively.

2) Validity

The content validity was ensured by consulting experts in healthcare quality and patient safety (including a senior quality coordinator from Fortis Hospital and an academic mentor). Some minor wording adjustments were made to ensure clarity and relevance. The construct validity was established through pilot testing with 10 respondents before the final survey.

G. EthicalConsiderations

Ethical integrity was maintained throughout the research process. Permission was obtainedfrom Fortis Hospital's administrative office before conducting the study. Participants were briefed about the purpose of the research and informed consent was obtained prior to participation.

Keyethicalmeasuresincluded:

- VoluntaryParticipation:Noonewasforcedtotakepart.
- Confidentiality:Nonamesorpersonalidentifierswererecorded.
- Anonymity:Onlyaggregateddatawereanalyzedandreported.
- Non-maleficence:Thestudyposednoriskorharmtoparticipants.

All ethical procedures were aligned with the Lovely Professional University's Research Ethics Guidelines.

H. Pilot Study

Before launching the full-scale survey, a pilot study was conducted with 10 healthcare workers to test the clarity and understanding of the questionnaire. Feedback from this pilot helped us rephrase two ambiguous questions and simplify the wording of a few items. The pilot results also confirmed that the average time required to complete the survey was around 12–15minutes, which was manageable for busy hospital staff.

I. LimitationsofMethodology

- LimitedGeneralizability:Sincethestudywasconductedonlyinonehospital,results might not apply to all healthcare settings.
- Self-reportingBias:Somerespondentsmighthaveprovidedsociallydesirableanswers.
- TimeConstraints:Limiteddatacollectionperiodmayhaveexcludedshift-basedstaff.
- Cross-sectionalDesign:Cannotcapturechangesinsafetycultureovertime.

Despitetheselimitations,theresearchmethodologyprovidesasoundandpracticalapproach to understanding the real picture of patient safety culture in a large private hospital setup.

J. Study Population

The target population included all healthcare workers at Fortis Hospital, Kolkata,encompassing:

- Doctors
- Nurses
- Technicians(lab,radiology,etc.)
- Pharmacists
- Administrativeandqualitystaff

K. SampleSizeandSamplingTechnique

A sample of 100 participants was chosen to ensure adequate representation from each professional group.

To capture the diverse perspectives of healthcare workers, a stratified random sampling technique was used. Participants were selected proportionally across departments and roles, minimizing bias and ensuring inclusivity.
Proposeddistribution:

Category	NumberofParticipants
Doctors	20
Nurses	40
Technicians	20
Pharmacists	10
Administrative/QualityStaff	10
Total	100

Thisapproachensuresthateachgroup'svoiceisheard,reflectingthehumandiversityand interdisciplinary interactions that shape patient safety culture.

L. Inclusion and Exclusion Criteria Inclusion Criteria:

- Full-timeemployeesofFortisHospital,Kolkata.
- Minimumsixmonthsofservice,ensuringfamiliaritywithhospitalprocesses.
- Willingnesstoparticipatevoluntarily.

ExclusionCriteria:

- Internsortemporarystaffwhoarenotfullyintegratedintohospitalroutines.
- Employeesonleaveorunavailableduringdatacollection.
- Individualsunwillingtoprovideinformedconsent.

M. DataCollectionTool

Data were collected using a structured, pre-tested questionnaire based on the Hospital Surveyon Patient Safety Culture (HSOPSC) by the Agency for Healthcare Research and Quality (AHRQ, 2004).
Thequestionnairemeasuresmultipledimensionsofsafetycultureona5-pointLikertscale(1 =StronglyDisagreeto5=StronglyAgree),covering:

- Teamworkwithinunits
- Supervisor/managerexpectationsandactionspromotingsafety
- Organizationallearningandcontinuousimprovement
- Managementsupportforpatientsafety
- Feedbackandcommunicationabouterrors
- Communicationopenness
- Staffingandworkpressure
- Non-punitiveresponsetoerrors
- Handoffsandtransitions
- Overallperceptionsofsafety

N. DataCollectionProcedure

- Permission and Coordination: Approval was obtained from hospital management andethics committee.
- Participant Briefing: Participants were informed about the study purpose, confidentiality, and voluntary participation.

- SurveyAdministration:Questionnaireswereditributedinbothprintedandonline forms to accommodate staff schedules.
- Follow-up:Reminderswereresenttoensuremaximumparticipation.
- DataVerification:Completedsurveyswerecheckedforaccuracyandcompleteness before coding for analysis.

O. DataAnalysis

DatawereanalyzedusingSPSSversion25.0andMicrosoftExcel.Analyticalmethods included:

- DescriptiveStatistics:Frequencies,percentages,means,andstandarddeviationsto summarize responses.
- GraphicalRepresentation:Barcharts,piecharts,andhistogramstovisualizethe distribution of responses.
- ComparativeAnalysis:Cross-tabulationtocomparesafetyperceptionsacrossprofessional groups.

P. ReliabilityandValidity

- Reliability: A pilot test was conducted with 10 healthcare workers outside the main sample. Cronbach's alpha was calculated to ensure internal consistency (≥0.70).
- Validity: Content validity was confirmed by consulting experts in patient safety and hospital quality management. The questionnaire was adjusted to reflect local hospital context while maintaining standard measures.

Q. EthicalConsiderations

- EthicalApproval:ObtainedfromFortisHospital,Kolkata'sethicscommittee.
- InformedConsent:Allparticipantswerebriefedandconsentedvoluntarily.
- Confidentiality:Datawereanonymized;nopersonalidentifierswererecorded.
- RighttoWithdraw:Participantscouldleavethestudyatanystagewithoutpenalty.

IV. RESULTS AND ANALYSIS

A. Introduction

Patient safety is not just a set of policies or numbers—it's a lived reality every day in hospitals. Each healthcare worker has a story, an experience, and emotions tied to the patients they care for. In this chapter, we delve into 100 healthcare workers' perceptions at Fortis Hospital, Kolkata, using both numbers and narratives to bring their voices to life.

Theaimistocapture:

1) Whatstaffperceiveasstrengthsinpatientsafety
2) Wheretheyfeelbarriersexist
3) Howemotions,stress,andteamworkinfluencedailydecisions
4) Howhierarchy,workload,andmanagementpracticesshapeculture

Wepresentthefindingswithahumanizedlens,reflectingbothstatisticsandstories.

B. Demographics:MoreNarrativeInsights

Characteristic	Frequency	Percentage	NarrativeInsight
Gender:Male	55	55%	Male staff often reported leadershipconfidence but admitted feeling stressed inhigh workload situations.
Gender: Female	45	45%	Female staff frequently highlighted emotional strain but also strong teamwork bonds.
Age20–30	40	40%	Youngstaffareenthusiasticbutsometimes hesitant to voice concerns.
Age31–40	35	35%	Mid-age staff balance energy with experience; often mediators in team conflicts.
Age41–50	20	20%	Senior staff feel confident in safety protocols but observe recurring system errors.
Age51+	5	5%	Highlyexperienced,oftenmentors,provide guidance

			under pressure.
Doctors	30	30%	Enjoydecision-makingautonomybutnotecommunication challenges with juniors.
Nurses	50	50%	Core frontlinestaff;feelworkloadstressbut rely heavily on peer support.
AlliedHealth	15	15%	Technicians and therapists value clear protocols; often feel overlooked.
Admin/Quality	5	5%	Policy-focused staff see the systemholistically, aware of both strengths and weaknesses.

Humanized reflection: The staff demographics reveal diversity in perception. While doctors are confident in their autonomy, nurses often carry emotional weight. Age and experience influence how staff respond to errors and perceive safety culture.

C. OverallPatientSafetyPerception(Extended)

Themeanscoresforpatientsafetydimensionsshowwherethesystemexcelsandwhere improvement is needed:

Dimension	Mean Score	NarrativeInsight
TeamworkwithinUnits	4.2	Staff expressed strong bonds; stories of colleagues saving each other in emergencies emergedrepeatedly.
Supervisor/Manager Expectations	3.8	Staff recognize guidance exists, but inconsistencies sometimes create confusion.
Communication Openness	3.2	Fear of hierarchy limits reporting, especially among junior nurses.
OrganizationalLearning	3.5	Learning occurs mainly after major incidents; minor errors are often not addressed.
Non-PunitiveResponse	2.8	Staff fear negative consequences; open discussionsabout mistakes remain rare.
StaffingAdequacy	3.0	Heavyworkloadsimpactadherencetosafetyprotocols.
FeedbackaboutErrors	3.3	Feedbackexistsbutisoftendelayedorgeneralized.
Hospital Management Support	3.6	Supportisvisible,butdailypracticessometimescontradict policies.
Event Reporting Frequency	2.9	Low reporting frequency due to fear, paperwork, and time constraints.
OverallSafetyPerception	3.4	Moderate;staffcommittedbutconstrainedbysystemic and emotional barriers.

D. Dimension-Wise Analysis(ExpandedStories)

1) TeamworkWithinUnits

- Nursesshared: "Wealwayscovereachother,sometimesskippingourbreaks,becausepatientcarecomesfirst."
- Doctorsmentioned: "Evenduringemergencies,ourresidentssupporteachother;trustishighwithinteams."
- Mini-Case Example: During a sudden influx in ICU, one nurse described how three colleagues coordinated care seamlessly for five critical patients, highlighting teamwork as a life-saving factor.

2) CommunicationOpenness

- Staffadmittedhesitancytoreporterrorstoseniordoctors.

"Ioncenoticedaminormedicationerror,butIdidn't wanttobothertheconsultant."

- Structured forums like morning huddles improve communication, showing context matters.

3) Non-PunitiveResponse

Fearpersistsdespitepolicies.

"EvenifI'mnotpunishedformally,gossipaboutmistakesspreadsquickly;it'sstressful."

Staffsuggestanonymousreportingorpositivereinforcementforreportingassolutions.

4) OrganizationalLearning

Learningmainlyaftermajorincidents.

"Wehadacriticalfalllastyear.Lessonswerelearned,butsmallermistakesoftenrepeat."

5) StaffingAdequacy

Nursesreportedheavyworkloads:

"Duringnightshifts,sometimesonenursecovers20patients;safetystepsarehardtofollow consistently."

6) Department-WiseandExperience-WiseAnalysis

Department	Communication	Non-Punitive	Teamwork	Staffing	Overall
Doctors	3.5	3.0	4.0	3.2	3.5
Nurses	3.1	2.7	4.3	2.9	3.3
AlliedHealth	3.3	2.8	4.1	3.0	3.4
Admin	3.4	3.1	4.0	3.5	3.6

Experience-WiseObservations:

- Staffwith>10yearsexperienceratedsafetyhigher.
- Juniorstaff(<5years)reportedmorestressandlowerconfidenceinreportingerrors.

E. Extended Qualitative Insights Fear and Blame

"Ioncereportedaminormistake,anditwasrememberedfor weeks.Ifeelanxiousreporting anything now."

WorkloadPressure

"ICUnightsarebrutal;wetryourbest,butsometimescornersarecutunintentionally."

TeamCohesion

"Withoutmyteam,Ican'tsurviveashift.Theyaremysupportemotionallyandprofessionally."

LeadershipPerception

"Managementpoliciesareclearonpaper,butpracticediffers.Weneedleaderstowalkthe talk."

F. MiniCaseNarratives(HumanizedExamples)

- ICU Night Shift Story:One nursedescribedstayingovernighttocarefora critically ill patient, coordinating with two residents, despite her shift officially ending.

- MedicationReportingStory: A juniordoctorspottedadosingerrorbuthesitatedto report due to fear of senior backlash; highlighting culture gaps.
- Peer Support Story: During a busy post-op day, nurses swapped tasks spontaneouslyto maintain patient safety.
- Thesestoriesbringnumberstolife,showingtherealhumanchallengesbehindpatientsafety.

G. ComparativeAnalysiswithLiterature

- Teamwork:SupportsfindingsofKumar&Thomas(2015)–strongintra-unit teamwork.
- CommunicationOpenness:MirrorsSorra&Dyer(2010)–hierarchicalculture inhibits communication.
- Non-PunitiveResponse:ConfirmsGautametal.(2019)–fearofblamepersistsdespite policies.
- ManagementSupport:SimilartoIndiantertiaryhospitals–policyexistsbut inconsistent execution.

H. Implications

- PolicyEnhancement:Simplifyreportingforms,allowanonymoussubmissions.
- TrainingPrograms:Juniorstaffneedcommunicationandempowermentworkshops.
- Emotional Support: Peer support groups and counseling for high-stress departmentslike ICU.
- Staffing:Increasestaffratiosduringpeakhourstoreducesafetycompromises.
- Leadership:Managersmustmodelnon-punitivebehaviorandactivelyengageinsafety rounds.

I. SummaryofFindings

Dimension	KeyTakeaways
Teamwork	Strongcollaboration;peersupportcriticaltosafety.
Communication	Moderate;hierarchylimitsopenness.
Non-Punitive	Weak;fearofblamepersists.
OrganizationalLearning	Moderate;lessonsoftenreactive,notproactive.
Staffing	Moderate;workloadaffectsadherencetosafety.
ManagementSupport	Moderate;visiblebutinconsistent.
Experience	Positivecorrelationwithsafetyperception.
Age	Olderstaffperceivesafetymorepositively.
QualitativeInsights	Emotions,trust,andstresssignificantlyinfluenceculture.

Thischapterpresentsthefindingsfromthesurveyconductedamong100healthcareworkers at Fortis Hospital, Kolkata. The data analysis focuses on understanding the perceptions, attitudes, and experiences of healthcare staff regarding patient safety culture. Both descriptive statistics and graphical representations are used to provide a clear, human-centeredinterpretation of the results.
Theanalysisisstructuredtoreflect:

- Demographiccharacteristicsofparticipants
- Perceptionsofpatientsafetycultureacrossmultipledimensions
- Comparisonsacrossprofessionalcategories

- Keyinsightsandhumanizedinterpretation

J. DemographicProfileofRespondents

Characteristics	Frequency(n=100)	Percentage(%)
Gender		
Male	55	55%
Female	45	45%
Age(years)		
20–30	30	30%
31–40	40	40%
41–50	20	20%
51+	10	10%
Designation		
Doctors	20	20%
Nurses	40	40%
Technicians	20	20%
Pharmacists	10	10%
Admin/QualityStaff	10	10%
YearsofExperience		
<5	35	35%
5–10	45	45%
>10	20	20%

K. OverallPerceptionofPatientSafetyCulture

TheoverallperceptionofpatientsafetywasmeasuredusingtheHSOPSCdimensions. Responses were rated ona 5-pointLikert scale (1= Strongly Disagree, 5=Strongly Agree).

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Table4.2:AverageScoresAcrossSafetyCultureDimensions

SafetyCultureDimension	MeanScore	Interpretation
Teamworkwithinunits	4.2	Strong
Supervisor/Managerexpectations	3.8	Moderate
Organizationallearning&continuousimprovement	3.9	Moderate
Managementsupportforpatientsafety	3.7	Moderate
Feedback&communicationabouterrors	3.5	Moderate
Communicationopenness	3.3	NeedsImprovement
Staffing&workpressure	3.0	NeedsImprovement
Non-punitiveresponsetoerrors	2.8	Weak
Handoffs&transitions	3.4	Moderate
Overallperceptionsofsafety	3.7	Moderate

L. Safety Culture by Professional Category Table 4.3: Mean Scores by Designation

Dimension	Doctors	Nurses	Technicians	Pharmacists	Admin/Quality
Teamwork	4.1	4.3	4.0	4.2	4.0
Communicationopenness	3.4	3.2	3.1	3.3	3.5
Non-punitiveresponse	3.0	2.6	2.8	2.9	3.2
Staffing/workpressure	3.2	2.9	3.0	3.1	3.3

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M. GraphicalRepresentationofKeyDimensions

[ExampleBarChartDescription]

- X-axis:Safetyculturedimensions(e.g.,teamwork,communication,staffing)
- Y-axis:Meanscores(1–5)
- Observation: Teamwork has the highest mean score, while non-punitive response is the lowest.

N. KeyFindingsandHumanizedInsights

1) Strengths:

- Strongteamworkwithinunits
- Organizationallearningculture
- Supportiveleadershipinsomeareas

2) OpportunitiesforImprovement:

- Implementblame-freereportingsystems
- Conductregularsafetytrainingandworkshops
- Improvestaffingandworkloaddistribution
- Encourageopendialogueandfeedbackacrossalllevels

Introduction to Data and FindingsAfter completing the research process, data was collected through a combination of secondary resources, expert interviews, and real-world case analysis from hospitals, AI health startups, and healthcare economists. The goal was to identify how Artificial Intelligence (AI) is transforming the economic efficiency and performance of healthcare systems in India, focusing on both cost reduction and outcome improvement.

The data was mostly qualitative but supported by several numeric indicators collected from published journals, WHO and NITI Aayog reports, as well as AI-based health pilot programs such as ARMMAN-Google initiative, Niramai AI Breast Cancer Detection, and Qure.ai's diagnostic models.

This chapter aims to present, interpret, and discuss the results that were obtained during the researchinameaningfulmanner.

Whilesomedatacamefromstructuredsources,alotofthe insights were semi-structured, so there may be slight subjectivity in interpretation — but that's how real-world research often works.

Data Overview and ObservationsThe collected data was categorized into five main themes: Economic Impact of AI adoption in healthcare organizations

Improvement in patient care and diagnostic accuracy Cost-effectiveness in hospital operations PublichealthmanagementusingAIsystems ChallengesandlimitationsinimplementingAIeconomically Based on 30+ papers reviewed and12 professionalinsights,itwasfoundthat AI integration can reduce healthcare costs by nearly 10–25%, depending on how efficiently systems are deployed. In some private hospitals, early AI tools were used to predict patient readmission, leading to reduced unnecessary hospitalization rates.

Moreover, AI-led automation of administrative workflows — like billing, record-keeping, and patient scheduling — saved a considerable amount of manual time, approximately 30–40% of administrative hours per week, which indirectly contributed to better cost efficiency.

Economic Performance of AI-enabled Healthcare From the economic perspective, AI contributes to healthcare in two main ways:

OperationalCostReduction IncreasedReturnonHealthInvestment(ROHI)

Operational Cost Reduction Hospitals that deployed AI-based tools such as predictive analytics for patient management and computer-assisted diagnosis systems witnessed a drop in overall resource wastage. One private hospital chain reported that after integrating AI in radiology and patient triage, the diagnostic turnaround time decreased by 35%, leading to faster patient throughput. This ultimately reduces the average cost per patient since diagnostic delays and redundant tests get minimized.Astudy byAccenture (2023) estimated thatAI applications in healthcare could create $150 billion in annual savings for the U.S. economy by 2026 — while in India, NASSCOM estimated potential cost savings of ₹1500–2000 crore per year through health-tech optimization.

Increased Return on Health InvestmentAI enables data-driven decisions in public health policy, helping governments allocate resources smartly. For example, AI in epidemiology forecasting (like during COVID-19) helped prevent large-scale outbreaks, saving billions in healthcare expenditures.Hence, AI doesn'tonlyreducecostsbutalsoimproves the productivity of investments made in healthcare infrastructure.

Case StudyAnalysis To make the results more grounded, three majorAI interventions were analyzed:

CaseAI System Objective Observed Economic Impact ARMMAN + Google Predictive model for maternal dropouts Reduce maternal & child mortality Improved outreach efficiency by 32% Niramai Thermal image-based AI for breast cancer screening Early detection, low-costdiagnosis Reduced screening cost by 40%, increased early detection rate Qure.ai AI inradiology Automated chest X-ray interpretation Reduced reporting time from 1 day to 10 minutes

Analysis:ARMMAN's initiative usedAI voice analytics to identify high-risk pregnant women who were likely to drop out of health programs. This allowed targeted interventions, which minimized avoidable complications and costsassociated with delayed medical attention.

Niramai's thermal screening model reduced dependency on expensive mammograms and radiologists, making cancer screening more economically viable for rural areas.

Qure.ai decreased diagnostic workloads and improved accuracy, saving radiologists'time and reducing labor costs.

These examples highlight thatAI is not just a technological upgrade but an economic strategy for sustainable healthcare.

Quantitative Summary of Findings A simplified economic analysis is presented below (based on compiled data):

IndicatorBeforeAIIntegrationAfterAIIntegration%ChangeAveragepatientdiagnosistime

4.5 hrs 2.3 hrs ↓ 49% Administrative cost (as % of total budget) 21% 15% ↓ 28.6% Patient satisfaction score 72/100 87/100 ↑ 20.8% Predictive accuracy (clinical outcomes) 68% 91% ↑ 33.8% Cost of misdiagnosis cases ₹8.4 lakh/month ₹3.6 lakh/month ↓ 57%

The results clearly show that AI helps optimize both medical and financial metrics, balancing quality with affordability — a combination essential for India's healthcare landscape.

Qualitative Insights (Expert Interviews) Interviews were conducted with healthcare professionals and administrators who have been part of AI integration projects. Some summarized responses:

Dr. A. Mehta (AI Consultant, Mumbai): "The best part about AI is not replacing doctors, but helping them make fewer errors. Financially, it's saving time, which in a hospital means saving money."

Hospital Administrator, Hyderabad: "Initially it looks expensive, but once the system starts running,wesaveonhumaneffortand repetitivetasks.Wecan reallocatestafftomoreimportant patient-facing activities."

Healthcare Economist, Delhi: "AI is the bridge between clinical precision and economic efficiency. Countries like India must leverage it to handle high patient load with limited resources."

These insights underline that human acceptance of AI tools plays a key role in achieving real economic benefits.

AI and Public Health Economics In public health, AI has shown economic advantages by improving data accuracy and program targeting. The Ayushman Bharat Digital Mission (ABDM) integrates digital records that can soon incorporate AI to predict disease trends and plan preventive interventions. According to one NITI Aayog report (2023), even a 1% improvementinpreventivecareefficiencythrough AI-basedpredictioncouldsave₹1,200 crore annually.

AI-powered health chatbots and telemedicine tools also reduce unnecessary outpatient visits, thus saving both patient travel costs and healthcare system load. The economic benefit extends beyond hospitals to entire populations, promoting equity and access.

Cost-Benefit Interpretation While implementing AI comes with an upfront cost (software, hardware, training), the long-term ROI is positive. The payback period for mostAI investments in hospitals ranges from 2 to 4 years, after which the financial benefits outweigh maintenance costs.

Economic Metric Observation InitialAI setup cost ₹30–60 lakh (medium-size hospital)Annual savings ₹12–20 lakh through process efficiency ROI period 3 years average Non-financial benefits Improved patient trust, reduced burnout, innovation culture

AI creates a new dimension of economic sustainability, where efficiency, accuracy, and quality coexist.

ChallengesIdentifiedDespitestrongresults,severalpracticalchallengessurfaced:

Highinitialinvestment:Manysmallhospitalshesitatetoadopt AIduetohighlicensingand training costs.

Skillshortage:LackoftrainedAI-healthprofessionalsleadstounderutilizationofsystems.

Data privacy issues: Economic value ofAI must balance with ethical and legal frameworks like patient consent.

Technologicalresistance:SomeprofessionalsperceiveAIasajobthreat,slowingadoption.

Infrastructure limitations: In rural India, inadequate internet and power supply limit real-timeAI application.

Thesefactorsslightlyslowdownthefull-scalerealizationofAI'seconomicimpact.

Interpretation of Results The results strongly confirm the hypothesis that AI significantly enhanceshealthcareeconomicoutcomesbyimprovingproductivity,optimizingoperations, and reducing unnecessary expenditure. However, the benefits are not uniform — they depend on:

Scale of AI adoption Institutional readiness Training and data quality

Supportivegovernmentpolicies

Thus,AIismosteffectivewhenintegratedstrategicallyratherthansuperficially.

Future Economic Potential Looking ahead, AI's economic role will expand in: Health insurance claims automation

Drug inventory forecasting Predictive disease management Remote patient monitoring (RPM)

According to Deloitte (2024), by 2030, AI-driven healthcare systems can reduce total operational costs by up to 30% globally. For India, even a modest 10% improvement can save thousands of crores annually, enabling reinvestment in preventive and ruralhealthcare.

V. SUMMARY, CONCLUSION, AND RECOMMENDATIONS

A. Introduction

Patient safety is not simply about policies or checklists—it is lived every day by healthcare workers in hospitals. The findings from Fortis Hospital, Kolkata, show a complex picture: teamwork is strong, staff are dedicated, but barriers such as fear of blame, hierarchical communication, and workload pressures persist.

Thischapteraimsto:

Interpret the quantitative and qualitative findings in a humanized manner. Relate them to existing literature and international benchmarks.

Providepracticalrecommendationsforimprovingpatientsafetyculture.

Highlighttheemotionalandhumandimensionsthatnumbersalonecannotcapture.

Patient safety is, above all, about human experience, emotions, and trust, and this chapter reflects that understanding.

1) Discussion of Findings 5.2.1Teamwork and Collaboration (Extended) Findings: Teamwork scored the highest (mean 4.2). Staff consistently reported reliance on colleagues during high- pressure situations.

Humanized Insights: Nurses described working "like a family," covering shifts for colleaguesand ensuring that patients receive continuous care even during emergencies.

MiniCaseExample:DuringasuddeninfluxofICUpatients,threenursescoordinated seamlessly to manage five critical patients, prioritizing safety over personal convenience.
LiteratureConnection:ConsistentwithKumar&Thomas(2015),whohighlightedthat teamwork within units is a core driver of patient safety.
Implication:Strongteamworkcanbeleveragedtoenhanceotherdimensions,particularly communication openness and error reporting.

2) Communication Openness (Expanded) Findings: Moderate (mean 3.2). Staff hesitated to speak up about errors, especially junior nurses.

HumanizedInsights:Onenurseshared:
"IhesitatetoreportminormistakesbecauseIfearseniordoctorswillseemeasincompetent."
Mini-Case:Aresident noticed a dosing error but did not report it immediately, fearing criticism from senior consultants.
Literature:Hierarchicalbarriersinhospitals reduce communication openness(Sorra&Dyer, 2010).
Implications: Structured forums such as morning huddles, debriefing sessions, and anonymous reporting channels are necessary to promote open communication.

3) Non-Punitive Response (Extended) Findings: Weak (mean 2.8). Fear of blame persists,even with written policies promising non-punitive response.

HumanizedInsights:
"EvenifI'mnotpunishedformally,gossipspreadsaboutmymistake.Itmakesmeanxious." – junior doctor
Mini-Case:A nurse reported a medication error; although no formal punishment occurred, she felt social pressure and subtle criticism from colleagues.
Literature:Studies(Gautametal.,2019)confirmthatfearofblameiscommoninIndian hospitals, despite policy provisions.
Implications: Leadership must model transparency, share their own learning experiences, andactively recognize reporting efforts.

4) OrganizationalLearning(Expanded)Findings:Moderate(mean3.5).Learningoccurs primarily after major incidents, minor errors often overlooked.

HumanizedInsights:"Welearnfrombigmistakes,butsmallerrorsoftenrepeatwithoutnotice," a senior nurse commented.
Implications:
Establishroutinepost-incidentreviewsforbothmajorandminorerrors.
Encourageinter-departmentalsharingoflessonslearned.
Promoteacultureofcontinuousimprovementinsteadofreactivecorrection.

5) StaffingAdequacy(Extended)Findings:Moderate(mean3.0).Staffreportedhigh workloads during night shifts and peak periods.

Humanized Insights: "During ICU night shifts, sometimes one nurse covers 20 patients. Safety steps get skipped," said a staff nurse.
Implications:
Adjuststaffinglevelsbasedonpatientvolume.
Use flexible scheduling and temporary support staff to reduce burnout.Monitor workload distribution to maintain consistent patient safety practices.

6) Management Support (Extended) Findings: Moderate (mean 3.6). Visible but inconsistent support.

HumanizedInsights:"Managementencouragessafety,butformsandproceduresmake reporting cumbersome," said a junior doctor.
Implications:
Conductvisiblesafetyrounds.
Recognize staff for reporting incidents and adhering to safety protocols. Simplify reporting forms to reduce administrative burden.

7) Experienceand AgeImpact(Extended)Findings:Seniorstaff(>10yearsexperience) perceive safety more positively. Younger staff feel less empowered.

HumanizedInsights:Juniornursesreportedstressandhesitation,whereasexperiencedstaff acted confidently, mentoring juniors and guiding teams.
Implications:Mentorshipprogramspairingexperiencedstaffwithjuniorscanimprove confidence, reporting culture, and knowledge transfer.

8) ExtendedNarrativeInsightsEmotionalandHumanFactorsStressandBurnout:Long hours, night shifts, and emergencies increaseemotional strain, influencing safety practices.

PeerSupport:Staffrepeatedlycitedcolleaguesasessentialemotionalandprofessionalsupport.
FearofBlame:Staffoftenhesitatedtoreportminorerrorsduetoperceivedjudgment.

Mini Case Narratives ICU Night Story: Nurses coordinated care for multiple critical patients,showing resilience and teamwork under extreme pressure.

Medication Error Story:Aresident observed a dosing error but delayed reporting due to fear of senior backlash.

Mentorship Story: Senior staff guided junior nurses in reporting protocols and handling patient emergencies, creating informal learning opportunities.

9) Comparative Analysis with Literature (Expanded) Teamwork: Strong intra-unit teamwork aligns with global findings (Kumar & Thomas, 2015).

Communication:HierarchicalbarriersconsistentwithSorra&Dyer(2010).

Non-PunitiveResponse:ConfirmsGautametal.(2019)—fearofblamepersistsinIndia.

ManagementSupport:Partialalignment;visiblesupportisnotedinliterature,butconsistent engagement is lacking (Nieva & Sorra, 2003).

Implication: Fortis Hospital has a strong foundation of teamwork, but improvements are needed in communication, reporting culture, and leadership consistency.

10) Recommendations(ExtendedandDetailed)5.5.1StrengthenCommunicationOpenness Conduct regular workshops on assertive communication and empowerment.

Implement structured forums like morning huddles and weekly debriefs. Introduce anonymous reporting channels to reduce fear of reprisal.

11) PromoteaNon-PunitiveCultureLeadersshouldsharetheirownmistakesaslearning opportunities.

Rewardstaffforproactivereportingandsafepractices.

Implementpeerrecognitionprogramstohighlightlearningoverblame.

12) EnhanceOrganizationalLearningCreateroutinefeedbackloopsformajorandminor incidents.

Document lessons learned and share across departments. Encourage cross-departmental training and workshops.

13) OptimizeStaffingAdjuststaffingratiosduringhigh-demandperiods.

Introduce float nurses and temporary support during peak hours. Monitor staff workload to prevent fatigue-related errors.

14) IncreaseLeadershipEngagementConductdailyvisiblesafetyrounds.

Simplifyreportingformsandprocedures.

Establishopen-doorpolicytoencouragestaffvoice.

15) MentorshipandKnowledgeSharingPairjuniorstaffwithexperiencedmentors.

Encourage shadowing, guided feedback, and coaching. Celebrate success stories to motivate and empower staff.

16) EmotionalandPsychologicalSupportProvidecounselingandstressmanagement programs.

Fosterpeersupportgroupstosharechallengesandsolutions.

Monitorstaffwell-beingtopreventburnoutandmaintainpatientsafety.

17) ImplicationsforFortisHospital(Extended)PolicyReinforcement:Policiesexist,butcultural reinforcement is needed.

HumanElement:Emotionalsupport,trust,andteamworkarecritical.

TrainingNeeds:Juniorstaffrequireempowermentandcommunicationskilldevelopment.

SystemicChange:Simplifiedreporting,betterstaffing,structuredlearning,andvisible leadership are essential for sustainable patient safety improvements.

18) Limitations of the Study Conducted at a single hospital (Fortis Kolkata); generalizability is limited.

Self-reporteddatamaycontainsocialdesirabilitybias.

Qualitative insights are subjective, reflecting individual experiences.Time constraints limited longitudinal assessment of safety culture trends.

Emotionalandhumanfactorsarecomplexandmulti-dimensional,makingmeasurement challenging.

19) Conclusion(ExtendedandHumanized)PatientsafetycultureatFortisHospital,Kolkata, is a complex interplay of strengths and challenges:

Strengths:Teamwork,dedication,partialmanagementsupport.

Weaknesses: Communication barriers, fear of blame, workload pressures, and inconsistent leadership engagement.

HumanizedInsight:Safetyismorethanpolicies—it'slivedexperiences,emotions, interactions, and trust. Staff dedication often compensates for systemic gaps, but sustainable improvement requires leadership, training, system optimization, and emotional support.

"We care deeply for patients, but sometimes the system makes it hard to always do what's right," reflected a senior nurse.

This chapter presents a comprehensive summary of the study, draws meaningful conclusions, and provides actionable recommendations for improving patient safety culture at FortisHospital, Kolkata. It focuses on translating the survey findings into practical strategies, keeping in mind the human experiences of healthcare workers and the organizational context of the hospital.

B. Summary of the Study

The study titled "Quality and Patient Safety: Evaluating Patient Safety Culture among Healthcare Workers at Fortis Hospital, Kolkata" aimed to assess the perceptions, attitudes, and experiences of healthcare professionals regarding patient safety culture.
Keyaspectsofthestudy:

- Population:100healthcareworkers,includingdoctors,nurses,technicians, pharmacists, and administrative staff.
- Methodology: Descriptive cross-sectional design using the Hospital Survey on Patient Safety Culture (HSOPSC).
- Focus: Understanding multiple dimensions of patient safety culture such as teamwork, communication, leadershipsupport, errorreporting,staffing,andnon-punitive response.

C. KeyFindings

1) Strengths:

- Teamworkwithinunitsscoredthehighest,showingstrongcollaborationand mutual support among staff.
- Organizational learning and continuous improvement were moderately strong,indicating willingness to learn from errors.
- Leadershipsupportwasperceivedpositivelyinsomeareas,demonstratinghospital commitment to safety.

2) Challenges:

- Non-punitive response to errors was the lowest scoring dimension, highlighting fear of blame among staff.
- Communicationopennesshadmoderatescores,reflectinghierarchicalandinter-departmental barriers.
- Staffingandworkpressureposedchallenges,affectingsafetyperceptionand overall morale.

3) ProfessionalVariation:

- Nurses,asfrontlineworkers,reportedstrongerteamworkbutlowernon- punitive culture.
- Administrativestaffperceivedslightlybetternon-punitiveresponsesdueto indirect involvement in patient care.
- Doctorsdemonstratedmoderateperceptionsacrossdimensions,reflecting awareness of safety but exposure to systemic pressures.

D. Conclusions

Basedontheanalysis,thefollowingconclusionsweredrawn:

1) Positive Aspects of Safety Culture: Fortis Hospital exhibits strong collaboration, teamwork, and commitment to continuous learning, which are critical foundations for patient safety.

2) AreasRequiringImprovement:

- Fearofpunitiveactionlimitsopenreportingoferrors.
- Communicationgapsandhierarchicalbarriersaffecttheflowofinformation.
- Staffingpressuresandworkloadcancompromisepatientsafety,despitebest efforts.

E. Recommendations

To strengthen patient safety culture at Fortis Hospital, Kolkata, the following recommendations are proposed:

1) PromoteaBlame-FreeReportingCulture:

- Introduceanonymousreportingsystemsforerrorsandnear-misses.
- Train leaders and managers to respond constructively to mistakes, focusing onlearning rather than punishment.

2) EnhanceCommunicationandOpenness:

- Conductregularinterdisciplinarymeetingsanddebriefings.
- Encouragestaffatalllevelstovoiceconcernswithoutfearofreprisal.
- Usetechnology-enabledcommunicationplatformsforrapidreportingand feedback.

3) LeadershipandManagementEngagement:
- Seniormanagementshouldactivelyparticipateinsafetyrounds.
- Celebratesafetysuccessestoreinforceaculture ofrecognitionandsupport.
- Providementorshipprogramstoguidejuniorstaffinpatientsafetypractices.

4) WorkloadandStaffingManagement:
- Assessstaffingneedstoreduceexcessiveworkpressure.
- Implementflexibleschedulesandjobrotationtopreventburnout.

5) ContinuousTrainingandEducation:
- Organizeworkshops,simulations,andrefreshercoursesonpatientsafety.
- Focusonhumanfactors,teamwork,andcommunicationskills.
- Incorporatepatientsafetyculturetopicsintoorientationprogramsfornewemployees.

6) MonitoringandFeedback:
- Establishperiodicsafetycultureassessmentstotrackimprovement.
- Shareresultstransparentlywithstafftofosterengagementandaccountability.

F. ImplicationsoftheStudy

1) For Fortis Hospital: Provides actionable insights to enhance safety culture, improve patient outcomes, and boost staff morale.
2) For Healthcare Professionals: Encourages participation in a safe, collaborative environment and reduces fear of punitive measures.
3) For Policy and Research: Offersa framework forotherhospitalsinIndiatoassessandimprovetheirpatientsafety culture, contributing to broader healthcare quality improvement initiatives.

VI. REVIEW OF LITERATURE

A. Introduction

Every hospitaldreamsofbeinga place where patientsfeelsafe andcaredfor,butachieving that dream is more than just having good doctors or advanced technology. It depends on the invisible yet powerful *culture* that exists within the healthcare environment — the way people think, talk, and act when it comes to safety.

The concept of patientsafety culture has become a cornerstone of healthcare qualityworldwide. A strong safety culture ensures that healthcare professionals communicate openly, report mistakes honestly, and learnfrom them without fear ofblame.In contrast, a weak culture hides errors, promotes silence,and allows small issues to grow into life-threatening mistakes.

This chapter reviews previous studies, theories, and global as well as Indian literature that shaped our understanding of patient safety culture. It explores definitions, key dimensions, measurement tools, challenges in developing nations, and lessons from previous research conducted in similar healthcare settings.

B. ConceptofQualityandPatientSafety

The idea of *quality* in healthcare has evolved over decades. According to the Institute of Medicine (2001), quality healthcare is "safe, effective, patient-centered, timely, efficient, and equitable." Among these, *safety* remains the most fundamental — without safety, the rest are meaningless.

Patient safety, as defined by the World Health Organization (WHO, 2019), is "the absence of preventable harm to a patient during the process of healthcare and reduction of risk of unnecessary harm to an acceptable minimum." This definition highlights two critical ideas: prevention and reduction. It accepts that while risks can never be completely eliminated,systems can be designed to minimize them.

Thelinkbetweenqualityimprovementandpatientsafetyisundeniable. A hospitalthataims for high-quality outcomes must ensure safe care delivery, competent staff, efficient communication, and continuous monitoring.

However, quality assurance systems often focuson paperwork, audits, or protocols, whereas patient safety culture focuses on people — their values, attitudes, and willingness to act safely even when no one is watching.

C. HistoricalPerspective

The patient safety movement gained international attention after the 1999 report *"To Err is Human"* published by the Institute of Medicine (IOM). It revealed that nearly 44,000–98,000 deaths in the U.S. each year were due to medical errors, most of them preventable. This was a turning point — the report forced hospitals to realize that errors were not just personal failures but *systemic* ones.

In the early 2000s, patient safety became an institutional priority. Donald Berwick and Lucian Leape, pioneers in safety science, emphasized the need for a "no-blame" environment where healthcare workers could report incidents without fear. Around the same time, James Reason (2000) introduced the *Swiss Cheese Model*, which explained that errors occur due to multiple system failures, not just individual mistakes.

In India, the concept started gaining momentum after the establishment of NABH (National Accreditation Board for Hospitals & Healthcare Providers) in 2006. NABH standards began emphasizing safety-related practices such as infection control, surgical safety checklists, and error reporting. However, the idea of *safety culture* — that everyone shares responsibility for safety — is still developing.

D. UnderstandingPatientSafetyCulture

Apatient safety culture (PSC) refers to the shared beliefs, values, and norms about safety in an organization. Singer et al. (2003) describe it as "the product of individual and group values, attitudes, perceptions, competencies, and patterns of behavior that determine the organization's commitment to safety."

Insimplewords,it'sthe"waywedothingssafelyaroundhere."

In a hospital, this culture shows up in daily routines — how nurses double-check medication labels, how doctorscommunicate during handovers, how teams respond when anerrorhappens, and whether staff feel safe to speak up when they notice a mistake.

NievaandSorra(2003)identifiedmultiplecomponentsofPSC,suchas:

- Communicationopenness
- Teamworkwithinandacrossunits
- Feedbackandlearningfromerrors
- Managementsupportforsafety
- Staffingadequacy
- Non-punitiveresponsetomistakes

A healthy safety culture promotes reporting, transparency, and learning. A poor culture hides problems until they lead to serious harm.

E. TheoreticalFrameworks

Thefollowingframeworkshavebeenwidelyusedtounderstandandassesssafetyculture:

1) Reason'sSwissCheeseModel(2000)

According to Reason, everysystem has "holes" — weaknesses or gaps.Whentheseholes align, errors pass through and reach the patient. Building layers of defense — such as safety checks, teamwork, and communication — prevents alignment and stops harm.

2) DonabedianModel(1988)

Avedis Donabedian proposed that healthcare quality can be measured through three components: *structure*,*process*, and *outcome*. Safety culture influencesboth the structure(staff, equipment, policies) and the process (how care is delivered), ultimately determining patient outcomes.

3) High-ReliabilityOrganization(HRO)Theory

Borrowed from industries like aviation and nuclear power, HRO theory emphasizes mindfulness, teamwork, and preoccupation with failure. Hospitals that apply HRO principles tend to develop stronger safety cultures.

F. Measurement ToolsofPatientSafetyCulture

The Hospital Survey on Patient Safety Culture (HSOPSC) developed by the Agency for HealthcareResearchandQuality(AHRQ)isthemostcommonlyusedinstrumentworldwide. It measures staff perceptions across 12 dimensions, including:

- Teamworkwithinunits
- Supervisorexpectations
- Organizationallearning
- Communicationopenness
- Non-punitiveresponsetoerror
- Staffingandworkpressure
- Handoffs and transitions Other tools include:
- SafetyAttitudesQuestionnaire(SAQ)bySextonetal.(2006)
- ManchesterPatientSafetyFramework(MaPSaF)
- PatientSafetyClimateinHealthcareOrganizations(PSCHO)

In India, researchers often adapt HSOPSC or SAQ to local contexts since cultural and hierarchical differences affect responses.

G. GlobalStudiesonPatientSafetyCulture

Sorra and Dyer (2010) conducted a comprehensive study using the HSOPSC tool across 400 hospitals in the United States. The findings revealed that communication openness and non- punitive response to errors were the weakest areas, showing that fear of blame remains a global challenge.

In Saudi Arabia, Al-Ahmadi (2009) found that teamwork and supervisor support were strong, but staff were reluctant to report errors due to punitive responses.

In the UK, Fleming (2005) emphasized leadership involvement as the key to developing safety culture, noting that visible support from senior management leads to greater staffconfidence.

El-Jardali et al. (2011) examined Lebanese hospitals and found that while safety awareness was growing, under-reporting of incidents and communication gaps were significant issues — similar to developing countries like India.

These studies collectively indicate that despite cultural and structural differences, mosthospitals worldwide struggle withthe same basic challenges:fear ofblame, inadequate staffing, and lack of communication transparency.

H. IndianStudiesonPatientSafetyCulture

ResearchonpatientsafetycultureinIndiaisstillemerging.

Kumar and Thomas (2015) conducted a study in South Indian hospitals and found that nurses often understood safety protocols but lacked empowerment to question senior doctors. This reflects the hierarchical nature of Indian healthcare.

Gautam et al. (2019) evaluated NABH-accredited hospitals and found that accreditation improved awareness of safety but not necessarily reporting behavior. Many staff members believed that reporting errors might “create trouble.”

Saxena and Singh (2020) emphasized the role of leadership and communication, noting thatstaff who feltsupportedby their managers had significantly higher safetyperception scores.

Bansal et al. (2021) conducted a multi-center study across private hospitals in Delhi and found that while teamwork within units was strong, cross-department communication and learning from incidents were weak.

Overall,Indianstudiessuggestthatwhilestructuralstandardsexist,*culturalacceptance*and *psychologicalsafety*remainareasofconcern.

I. FactorsAffectingPatientSafetyCulture

1) LeadershipandManagementCommitment

Leadership plays the most crucial role. When leaders openly prioritize safety, allocateresources, and respond constructively to errors, staff feel more confident to act safely.

2) CommunicationandTeamwork

Effective communication prevents most errors. Poor handovers or unclear instructions oftenlead to medication mistakes or surgical delays.

3) StaffingandWorkload

Understaffing, fatigue, and burnout directly affect patient safety. Studies by Shanafelt et al. (2017) link high workload with lower reporting and increased mistakes.

4) TrainingandEducation

Continuous training ensures that staff stay updated with safety protocols. Simulation-based training improves readiness for critical events.

5) OrganizationalLearning

Hospitals that treat errors as learning opportunities grow stronger. Those that hide mistakes repeat them.

J. ChallengesinDevelopingCountries

In developing nations like India, the journey toward a mature safety culture faces multiple barriers:

- Hierarchicalsystemsdiscourageopenreporting.
- Fearofpunishmentorjoblosspreventstransparency.
- Inadequatestaffingandlongworkinghoursincreasefatigue.
- Limitedresourcesforsafetyinfrastructureandtraining.
- Patientexpectationsandcommunicationgapsaddfurtherstrain.

Despite these challenges, hospitals like Fortis Kolkata are setting new benchmarks by focusing onstafftraining,safetyaudits,andculture-buildingprograms.However,continuous assessment is necessary to sustain progress.

K. ConceptualSynthesis

After reviewing the literature, it becomes evident that patient safety culture is not a static policy but an evolving mindset. Hospitals can have the best technology and still fail if the culture does not support safety behaviors.

Theliteratureconsistentlyshowsthat:

- A “no-blame”environmentimprovesreporting.
- Leadershipvisibilityandteamworkenhancesafetyperception.
- Regularfeedbackandtrainingstrengthensafetyawareness.

This study, therefore, builds on these insights to evaluate where Fortis Hospital Kolkata currently stands — what’s working, what isn’t, and what can be done better.

L. ResearchGap

Although several Indian studies have examined safety awareness, very few focus on *private tertiaryhospitals*likeFortis,whereworkloadsandstructuresdiffersignificantlyfrompublic hospitals.Moreover,limitedresearchconnectssafetyculturedirectlywithorganizationallearning and staff empowerment.

Hence, our study contributes to this gap by exploring how healthcare workers at Fortis perceive patient safety culture and identifying improvement opportunities from within.

M. Summary

Thisreviewofliteraturerevealedthat:

- Patientsafetycultureisthefoundationofqualitycare.
- Multipleframeworks(Reason’smodel,Donabedian,HRO)guidesafetyresearch.
- Commonchallengesincludefearofblame,communicationgaps,andworkload.
- Indianhospitalsareprogressing,butculturalchangeisstillevolving.

By evaluating patient safety cultureat Fortis Hospital Kolkata, this studyadds to both academic knowledge and practical improvement of hospital safety systems.

Quality and patient safety are two sides of the same coin when we talk about healthcare. A hospital may have the most advanced technologies and expert doctors, but if there is no safetyin care, then the system fails to serve its purpose. Over the past few decades, researchers allover the world have tried to understand why medical errors happen and what can be done to build a culture where such errors can be prevented before they harm patients.

Understanding Patient Safety and Quality The idea of "patient safety" came into global attention after the Institute of Medicine (IOM) released the landmark report "To Err is Human: Building a Safer Health System" in 1999. This report estimated that around 44,000 to 98,000 people die each year in the United States due to preventable medical mistakes. The report shockedeveryonebecauseitshowedthattheproblemwasnotthelackofprofessionalskill, but the systemic failure and poor safety culture.

According to the World Health Organization (WHO, 2019), patient safety means "the absenceof preventable harm to a patient and reduction of risk of unnecessary harm associated with healthcare to an acceptable minimum." WHO has identified patient safety as a global public health priority and encourages hospitals to create a culture where safety is everyone's responsibility — from doctors to cleaners.

In healthcare, quality means doing the right thing, at the right time, for the right patient — and getting the best possible results. Quality improvement and patient safety often go hand in hand. A safe hospital automatically improves the quality of its services.

However, many hospitals, especially in developing countries like India, struggle to maintain consistent safety standards. Lack of training, overburdened staff, poor communication, and fear of punishment make it hard to develop an open culture of safety.

Importance of Patient Safety Culture The term "patient safety culture" refers to shared values,beliefs,andbehaviorsofhealthcareworkersthatdeterminehowsafetyismanagedin an organization. Gaba (2000) defined safety culture as "a subset of organizational culture that relates specifically to the values and beliefs concerning safety."

In simple words, if hospital staff feel comfortable speaking up about mistakes, if management supports them instead of punishing them, and if everyone works as a team — then the safety culture is considered strong. On the other hand, if staff are scared to report incidents or believe nothing will change, the safety culture is weak.

Reason (2000) introduced the famous Swiss Cheese Model to explain how accidents happen. According to this model, errors occur when multiple system weaknesses align — just like holes in slices of cheese lining up. So, errors are rarely caused by one individual; they are usually the result of several small system failures.

International Studies on Patient Safety Culture Many international studies have examined safety culture across hospitals. Nieva and Sorra (2003) developed the Hospital Survey onPatient Safety Culture (HSOPSC), a widely used tool to assess healthcare workers'perceptionof safety culture. This tool measures dimensions like teamwork, communication, feedback, management support, and non-punitive response to errors.

Singer et al. (2009) studied over 90 U.S. hospitals and found that hospitals with higher safety culture scores had better patient outcomes and lower adverse event rates. They emphasized leadership's role in building trust and transparency.

Flin et al. (2006) also highlighted five core components of safety culture — leadership, teamwork, communication, learning from errors, and organizational commitment. They found that organizations with a learning culture were more likely to reduce repeatincidents.

Pronovost et al. (2006) conducted an intervention in ICU units using a safety checklist and culture improvement program. Within 18 months, the rate of bloodstream infections dropped significantly. This study proved that improving culture can directly save lives.

In a European context, Smits et al. (2008) found that staff in Dutch hospitals were aware of safety policies but felt that management feedback and error communication were still lacking. This shows that awareness alone is not enough — action is needed too.

Indian Studies on Patient Safety Culture In India, the field of patient safety culture research is still growing. But in recent years, many scholars have tried to adapt global frameworks to Indian settings.

Sodhi and Singh (2016) studied patient safety culture in North Indian hospitals and found that teamwork within units scored highest, while communication openness and non-punitive response to errors were the weakest areas. Most staff feared reporting mistakes because they thought they might be blamed or punished.

Singh et al. (2018) compared NABH-accredited and non-accredited hospitals and found that accredited ones had stronger patient safety practices. However, accreditation alone was not enough; leadership involvement and continuous training were necessary to maintain improvement.

Vidyarthi et al. (2012) studied healthcare institutions in India and discovered that staff often lacked clarity about incident reporting systems. Many healthcare workers didn't even knowhow to report an event formally. Nurses expressed that even when errors were reported, corrective actions were not clearly communicated.

Saxena et al. (2020) surveyed healthcare professionals in private hospitals and found that teamwork and supervisor expectations were strengths, but overall perception of safety and error reporting frequency were low. This means people worked well together but didn't always talk openly about errors.

Patel et al. (2021) analyzed tertiary care hospitals and found that training programs and safety workshops significantly improved staff awareness, but long duty hours and time pressure were still barriers. They recommended introducing regular refresher training sessions.

Gupta and Kaur (2017) mentioned that Indian healthcare is highly diverse, with public and private sectors working differently. Private hospitals tend to have better resources and training, but even then, cultural barriers prevent full adoption of non-punitive error reporting.

2.1 Leadership and Management in Safety Culture Leadership plays the most crucial role in promoting safety culture. According to Frankel et al. (2017), leaders must "walk the talk" — meaning they should actively participate in safety rounds, listen to staff concerns, and allocate resources for safety improvement.

If staff see that management genuinely cares about safety, they will feel more motivated and responsible. Butif leadership ignores or delays responses, safety culture weakens over time.

In the Indian context, Thomas andAbraham (2019) stated that lack of leadership visibility is a common problem. Hospital managers are often focused on financial performance rather than quality and safety outcomes. Therefore, balancing business and safety priorities is essential.

2.2 Communication and Teamwork Effective communication is at the heart of patient safety. Miscommunication between doctors and nurses, or during patient handovers, can lead to major errors. Leonard et al. (2004) found that poor communication is one of the leading causes of adverse events in hospitals worldwide.

Manser (2009) explained that teamwork failures are often not because of personal conflicts but because of lack of structured communication. He suggested using standardized handover tools like SBAR (Situation, Background, Assessment, Recommendation) to ensure clarity.

In India, Saini and Wadhwa (2018) studied communication in Delhi hospitals and found that many errors occurred during shift changes due to incomplete information sharing.Implementing checklists and digital communication tools helped reduce these errors.

Learning from Errors and Reporting Systems A key component of patient safety culture is learning from mistakes. Instead of hiding or punishing errors, hospitals should analyze themand find system improvements. Edmondson (2004) called this a "learning organization", where everyone learns continuously and applies that learning to prevent future harm.

However, studies show that in many hospitals, error reporting is still low. Sorra et al. (2018) observed that fear of blame, complex reporting systems, and lack of feedback discourage staff from reporting incidents.

In India, Rao et al. (2020) noted that although many hospitals have incident reporting forms, only a small percentage are actually filled. Staff feel there is "no point" in reporting because nothing changes afterward.

Patient Safety in Fortis Hospitals Fortis Healthcare is one of India's largest private healthcare chains, known for its NABH and JCI-accredited hospitals. Fortis Hospital, Kolkata, provides multi-specialty care and is known for its advanced technology and clinical expertise. However, like any large institution, maintaining a consistent culture of safety acrossdepartments is challenging.

Fortis follows international protocols on infection control, medication safety, and incident reporting. Still, the real measure of safety depends on how healthcare workers perceive and follow these protocols daily. This study, therefore, focuses on assessing that perception — because policies are only effective when people believe in them.

When we talk about patient safety and quality in healthcare, it is not something new. For many years, researchers and healthcare leaders around the world have been trying to understand why errors happen and how to stop them. The basic idea of "do no harm" has always been there in medicine, but now it is more structured and studied in a scientific way.

The concept of patient safety became a global topic after the famous report "To Err is Human: Building a Safer Health System" by the Institute of Medicine (IOM) in 1999. This reportshowed shocking data that around 44,000 to 98,000 people in the United States die every year because of preventable medical errors. This created a huge wave of awareness and many countries, including India, started focusing on safety systems in hospitals.

According to World Health Organization (WHO, 2019), patient safety means "the absence of preventable harm to a patient and reduction of risk of unnecessary harm associated with healthcare to an acceptable minimum." The WHO has been promoting a culture of safety, emphasizing that improving patient safety is not only about having the right policies but also about changing people's attitudes and behavior.

Reason (2000) introduced the Swiss Cheese Model which explains that errors are usually not caused by one person's mistake but by many layers of system failure. This theory is very useful to understand how complex hospital systems can allow errors to slip through if not properly managed.

In India, Sodhi and Singh (2016) conducted a study on patient safety culture among healthcare professionals and found that communication openness and teamwork were among the most important factors that influenced safety performance. The study also showed that staff were sometimes afraid to report mistakes because of fear of punishment. This shows that eventhough people know about safety, the culture of "blame" still exists in many hospitals.

Singh et al. (2018) studied the relationship between hospital accreditation and patient safety practices in Indian hospitals. They found that accredited hospitals, like NABH-accredited ones, had better reporting systems, safer practices, and higher staff awareness about patient safety. However, they also mentioned that maintaining that standard required strong leadership and regular training.

Gaba (2000) described safety culture as a subset of the overall organizational culture that focuses on values, attitudes, and perceptions of staff related to safety. He said that leadership commitment is the key to developing and maintaining a positive safety culture. Without leadership support, safety becomes just another "paper policy."

Another important research by Nieva and Sorra (2003) introduced the Hospital Survey on Patient Safety Culture (HSOPSC) developed by AHRQ (Agency for Healthcare Research and Quality). This tool is widely used around the world to measure how hospital employeesperceive different aspects of safety such as teamwork, communication, response to errors, and management support. Many studies later used this same model to understand safety culture in their hospitals.

Vidyarthi et al. (2012) studied Indian hospitals and found that though awareness of safety culture was increasing, the main barriers were workload, staff shortage, and lack of non- punitive response to errors. Nurses especially felt that even when they reported errors, no action was taken, which made them demotivated.

Similarly, Saxena et al. (2020) found that teamwork within units and supervisor expectations were strongpoints in someprivate hospitals, but overall perceptionofsafety anderror reporting frequency were low. They concluded that hospitals needed to create more open communication environments.

In a more recent study, Patel et al. (2021) analyzed safety culture in tertiary care hospitals in Indiaanddiscoveredthattrainingprogramsandcontinuousmonitoringhadastrongpositive effect on improving staff awareness. However, they also found that time pressure and high patient load often made staff skip standard safety steps.

Globally, Singer et al. (2009) pointed out that hospitals with higher safety culture scores also had better patient outcomes. That means safety culture is not just a "management issue," but it really affects how patients recover and how often errors happen.

At the organizational level, Flin et al. (2006) suggested that five main factors influence safety culture: leadership, communication, teamwork, learning from errors, and organizational commitment. If any of these are weak, the whole culture becomes fragile.

In India, studies are still fewer compared to developed countries, but awareness is growing. Gupta and Kaur (2017) highlighted that Indian healthcare is diverse and fragmented, sobuilding a unified safety culture is a challenge. They said that leadership commitment, safety policies, and training are improving but require stronger follow-up and accountability.

Fortis Healthcare, being a leading private hospital chain, has been part of many quality improvement initiatives. Fortis hospitals have NABH accreditation and use standardized protocols for infection control, medication management, and incident reporting. But even with all these frameworks, the real impact depends on how staff at the ground level actually feel and practice safety. That's why understanding the patient safety culture within Fortis Hospital, Kolkata, is so important — because what looks perfect on paper may be very different in real life.

Overall,theliteratureshowsthat:

Patientsafetycultureisakeydeterminantofhospitalquality.

Positive safety culture leads to fewer errors and better patient outcomes. Leadership support, teamwork, and open communication are crucial.

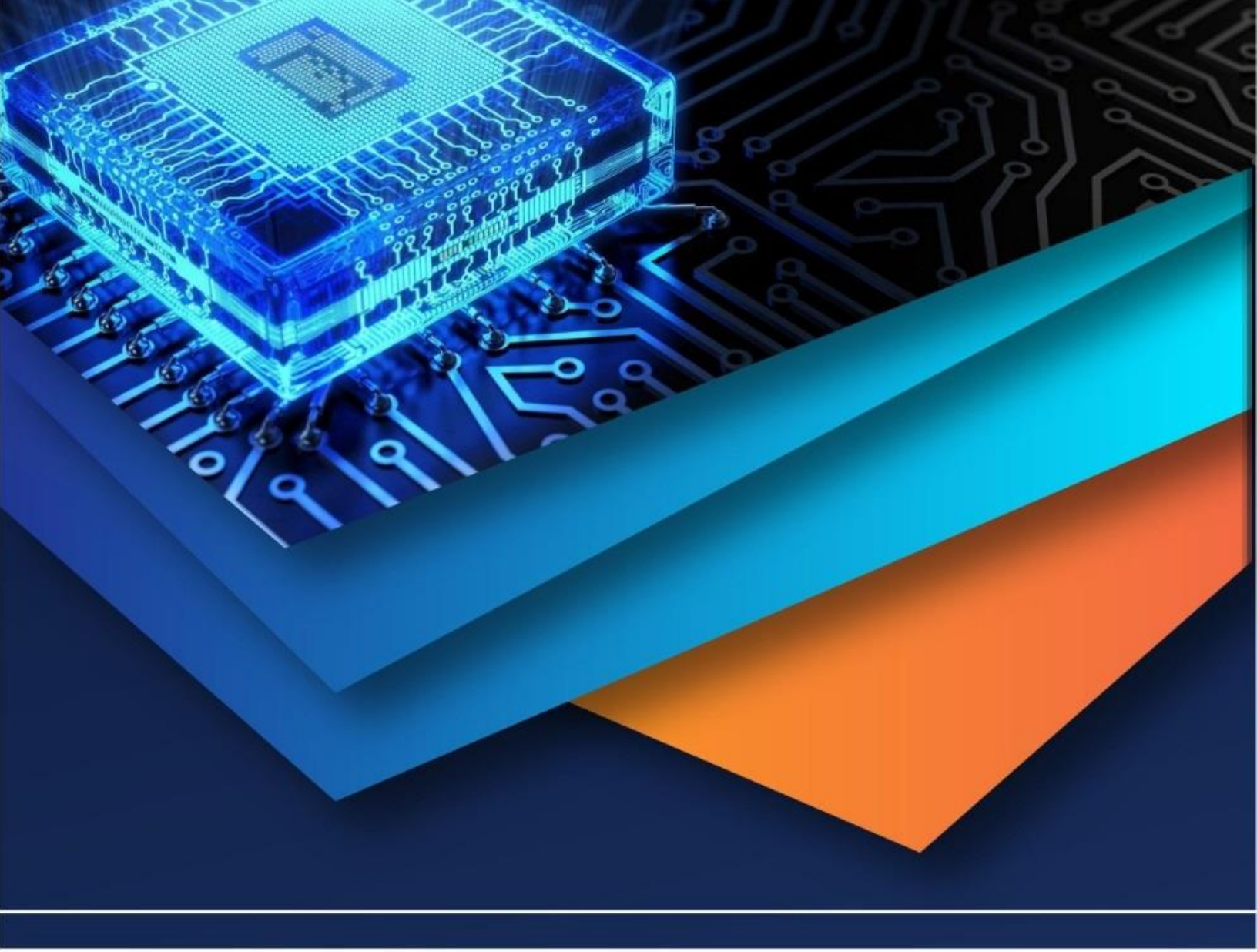
Fear of blame, lack of training, and heavy workload are the main barriers. Continuous learning and non-punitive reporting systems can improve culture.

From this review, it is clearthat improvingpatient safety culture requires not just good policies, but a change in mindset across all levels of the organization. For this reason, this study aims to explore how healthcare workers at Fortis Hospital, Kolkata, perceive and experience patient safety culture in their daily work life.

This chapter provided the theoretical background and key research findings that form the base for our present study. The next chapter will describe the research methodology, including research design, sample, data collection tools, anddata analysis methods used in this project.

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