

Annexure B (Cover page)

Internship Training

at

Medanta, the Medicity

Title Assessment of Patient Satisfaction and Feedback in ICU

by

Name Dr. Jayesh Balyan

Enroll No. PG/23/043

Under the guidance of

Dr.Sumesh Kumar

PGDM (Hospital & Health Management)

2023-25



**International Institute of Health Management Research
New Delhi**

Annexure C (Title Page)

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**International Institute of Health Management Research
New Delhi**

(Completion of Dissertation from respective organization)

The certificate is awarded to

Name Dr. Jayesh Balyan

in recognition of having successfully completed his/her
Internship in the department of

Medical Admin & Operations

and has successfully completed her Project on

Title : Assesment of Patient satisfaction and feedback in ICU

Date 07/07/2025

Organisation Medanta The Medicity

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

We wish him all the best for future endeavors.



Training & Development



Zonal Head-Human Resources

Annexure D

TO WHOMSOEVER IT MAY CONCERN

This is to certify that J A Y E S H B A L Y A N student of PGDM (Hospital & Health Management) from International Institute of Health Management Research, New Delhi has undergone internship training at MEDANTA THE MEDICITY From 7/04/25 to 7/07/25.

The Candidate has successfully carried out the study designated to him during internship training and his/her approach to the study has been sincere, scientific and analytical.

The Internship is in fulfillment of the course requirements.

I wish him all success in all his/her future endeavors.



Dr. Sumesh Kumar
Associate Dean, Academic and Student Affairs
IIHMR, New Delhi



Mentor
IIHMR, New Delhi

Certificate of Approval

The following dissertation titled **“Assessment of Patient Satisfaction and Feedback in the Intensive Care Unit (ICU)”** at **“Medanta- The Medicity”** is hereby approved as a certified study in management carried out and presented in a manner satisfactorily to warrant its acceptance as a prerequisite for the award of **PGDM (Hospital & Health Management)** for which it has been submitted. It is understood that by this approval the undersigned do not necessarily endorse or approve any statement made, opinion expressed or conclusion drawn therein but approve the dissertation only for the purpose it is submitted.

Dissertation Examination Committee for evaluation of dissertation.

Name

Dr. Manisha
Dr. Anup Kumar
f

Signature

Manisha
Anup Kumar

Certificate from Dissertation Advisory Committee

This is to certify that **Dr. Jayesh Balyan** , a graduate student of the **PGDM (Hospital & Health Management)** has worked under our guidance and supervision. He is submitting this dissertation titled "Assessment of Patient Satisfaction and Feedback in the Intensive Care Unit (ICU)" at "Medanta –The Medicity, Gurugram" in partial fulfillment of the requirements for the award of the **PGDM (Hospital & Health Management)**.

This dissertation has the requisite standard and to the best of our knowledge no part of it has been reproduced from any other dissertation, monograph, report or book.



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Annexure E

**INTERNATIONAL INSTITUTE OF HEALTH MANAGEMENT RESEARCH,
NEW DELHI**

CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled Assessment of Patient
satisfaction and feedback in ICU
..... and submitted by (Name) P.N. Jayesh Balan
..... Enrollment No. P.G./23/043
under the supervision of P.N. SUMESH KUMAR
for award of PGDM (Hospital & Health Management) of the Institute carried out during
the period from 7/04/25 to 7/07/25
embodies my original work and has not formed the basis for the award of any degree,
diploma associate ship, fellowship, titles in this or any other Institute or other similar
institution of higher learning.


Signature

Annexure F

FEEDBACK FORM

Name of the Student: DR. JAYESH BALYANI

Name of the Organisation in Which Dissertation Has Been Completed:

Medanta, The Medicity

Area of Dissertation:

Medical Administration & Operations

Attendance:

90%. Punctual

Objectives achieved: To understand the Process of Medical Administration and working of IPD Sections

Deliverables:

floor management sop's, Business Avenues

Strengths:

Attentive, Positive Attitude, Collaborative

Suggestions for Improvement:

Articulation Skills

Suggestions for Institute (course curriculum, industry interaction, placement, alumni):



Signature of the Officer-in-Charge/ Organisation Mentor (Dissertation)

Date:

27/07/25

Place:

Gurgaon





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CERTIFICATE ON PLAGIARISM CHECK

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Name of Guide/Supervisor	Dr./ Prof.:		
Title of the Dissertation/Summer Assignment	ASSESSMENT OF PATIENT SATISFACTION AND FEEDBACK IN THE INTENSIVE CARE UNIT		
Plagiarism detect software used	"TURNITIN"		
Similar contents acceptable (%)	Up to 15 Percent as per policy		
Total words and % of similar contents Identified			
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Abstract

Patient satisfaction has become a critical quality indicator in modern healthcare, reflecting not only the effectiveness of clinical care but also the quality of communication, comfort, and emotional support provided during hospitalization. In intensive care units (ICUs), where patients face life-threatening conditions and complex treatments, assessing satisfaction and feedback is essential for improving care delivery and patient-centered outcomes. This dissertation investigates the assessment of patient satisfaction and feedback in ICUs through a review of literature, analysis of existing survey tools, and evaluation of factors influencing patient and family perceptions of care.

The study explores multiple dimensions of ICU patient satisfaction, including quality of medical and nursing care, communication with healthcare providers, emotional support, pain management, environmental comfort, and involvement in decision-making. Both patient-reported experiences and family feedback are examined, recognizing the unique challenges of gathering direct input from critically ill patients. Key determinants influencing satisfaction—such as staff responsiveness, transparency in information sharing, and cultural sensitivity—are analyzed alongside barriers like patient unconsciousness, post-ICU psychological distress, and recall bias.

Findings indicate that systematic collection and analysis of satisfaction data can help identify service gaps, strengthen patient–provider relationships, and guide targeted interventions to enhance ICU care quality. The review also highlights the need for standardized, validated assessment tools adapted to ICU contexts. Recommendations emphasize integrating patient satisfaction metrics into ICU quality improvement programs, ensuring feedback is acted upon, and fostering a culture of compassionate, family-inclusive care.

"Assessment of Patient Satisfaction and Feedback in the
Intensive Care Unit (ICU) at Medanta Hospital"

Mentor- Dr. Sumesh Kumar
Name- Dr. Jayesh Balyan
Roll- PG/23/043

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1. Review.

. 1 Introduction to Neurocritical Care and its Relevance in the ICU. The field of neurocritical care is that which we see treatment of life threatening neurological disorders like ischemic stroke, hemorrhagic stroke, traumatic brain injury (TBI), status epilepticus, and neuromuscular emergencies. As reported by Smith et al. (2019) these complex conditions also put forth the need for close surveillance and advanced interventions which we see in the intensive care unit (ICU) setting. It is the function of the intensive care unit (ICU) and the multi disciplinary team which man tends that role out in this setting to stabilize the neurological patient in the critical stage and to also prevent secondary brain injury (Johnson Davis, 2020)

1.2 Overview of Medanta Hospital's Neuro-ICU Capabilities and Patient-Centered Approach

In terms of health care quality report cards family input and what patients' bring to the table are very important in ICUs which are high stress environments that see very poor patient outcomes which we see improved with better communication and emotional support (Brown et al., 2018). Also health care providers may develop trust, identify what is working and what is not in care delivery, and at the same time raise the bar on service quality by way of collecting and analyzing feedback (Williams Carter, 2017). In neurocritical care which has large numbers of patients with impaired consciousness family reports are key to determine care quality, communication break through, and psychosocial support.

1.4 Research Problem and Rationale

There is a lack of what which is put into study of patient and family satisfaction in neuro-ICUs at Indian private hospitals like Medanta which report great clinical care. To bridge the gap between excellent clinical care we must pay attention to what patients and families have to say. This study sets

out to do that which is to evaluate patient and family experience in this setting also to improve interprofessional relations in the ICU and to use that info to bring in focused quality improvements.

1.5 Objectives

In what ways do patients and their families experience neurocritical care at Medanta Hospital's intensive care unit. What are the primary themes related to clinical care delivery, emotional support, and communication. To put forth recommendations for patient centered care plans which in turn will improve the quality of neuro-ICU care. To see how interprofessional collaboration plays out in response to patient feedback and in what way it improves care quality.

2. Review of Literature

A. The Concept of Patient Satisfaction in Critical Care Environments

According to Alqahtani et al. (2020) patient satisfaction is a complex term which includes what patients report about health care services we see within that the elements of communication, empathy, clinical care quality and the hospital setting. Also reports by Khan et al. (2019) note that in critical care settings which are of a life threatening nature and have reduced patient autonomy patient satisfaction is reported to be a result of what health care staff interpersonal dynamics and emotional support plus treatment outcomes. As a result of patient Incapacitation which is a2 issue in Intensive Care Units which in turn makes it hard to measure satisfaction family members put forth the majority of the input regarding the quality of care and total experience (Papathanassoglou et al., 2018).

B. Previous Studies on ICU Feedback Mechanisms and Quality

Improvement

A variety of examples shed light on the importance of an ongoing quality improvement process which involves intensive care unit feedback systems.

For instance, Johnson et al. (2017) demonstrated that collecting patient and family provided information through interviews helps address the communication gaps within the organization leading to improved care coordination. Likewise, White et al. reported improved responsiveness from the staff as well as increased patient satisfaction after incorporating feedback into the ICU protocols in their 2019 study. Feedback surveys alongside qualitative interviews are commonly utilized in critical care to capture sophisticated experiences that inform purposeful actions in order to structure targeted bespoke initiatives (Wilson et al., 2018).

C. Role of Communication and Empathy in Neurocritical Care Settings

In neurocritical care which sees large numbers of patients that are emotionally distressed and have cognitive impairments effective communication and empathy in interaction is a must (Lee et al., 2021). Health care professionals' empathy which we see to include emotional support for patients reduces anxiety and at the same time builds trust which is so important in the high stress environment of the ICU (Martinez Smith, 2020).

Family members reported that they rate emotional support and clear consistent communication as the most important elements of care in neuro

ICUs which research by Gupta et al. (2019) reports. Also we see that poor communication does the opposite of what it should do which is to cause increased psychological strain and family discontent (Thomas et al., 2022).

D. Models and Frameworks Used in Analyzing Patient Satisfaction

In health care research we see that many models have been put forth which systemically look at patient satisfaction. A very used tool which looks at service quality from the patient point of view is the SERVQUAL model which puts forward issues of tangibles, dependability, responsiveness, assurance, and empathy (Parasuraman et al., 1988). Also from Braun and Clarke (2006) we learn that thematic analysis is a qualitative approach for identifying themes in data. It very much works well when looking at open ended survey responses in health care settings. By combining in depth qualitative thematic analysis with also the use of quantitative tools like SERVQUAL (Kumar Singh, 2020) health care facilities can present very in depth picture of patient experience.

E. Gaps in Current Literature, Especially in Indian Private Hospitals

Research in the field of patient satisfaction in Indian private health care settings of neuro-ICUs is still few, we do see a great interest in it grow. What we do have is research which is mostly on general intensive care or which is conducted in public hospitals (Rao et al., 2021). Also we see a great lack of study which looks at how private health care structure and culture play into patient and family report in India (Sharma Patel, 2022). This gap in research highlights the need for context based studies which will help us to identify the unique issues and challenges in private neurointensive care units and in turn develop tailored improvement strategies.

F. Impact of Patient Satisfaction on Clinical Outcomes and Healthcare Quality

In inpatient settings we see that there is a positive trend between what patients report regarding clinical care they receive and patient satisfaction. Also we see that what may cause this is that which reports high levels of satisfaction also see to have better health based results and greater

adherence to treatment which in turn sees them do better in their recovery (Doyle et al., 2013). Also we note that institutions are putting more of a focus on what patients have to say in terms of improving the quality of care and that is put forth as a very important element in health care quality assessment and accreditation (Luxford et al., 2011).

H. Importances of Interdisciplinary Collaboration in Enhancing Patient

Satisfaction

In neuro-ICUs we see that which care is provided in a coordinated way requires the effective multidisciplinary collaboration between neurologists, intensivists, nurses, and other health professionals (Smith Jones, 2017). Also from research we learn that cohesive teams report to improve patient and family satisfaction at the same time which also sees a reduction in errors and better clarity in communication (Thompson et al., 2018). Also that which improves the overall ICU experience and staff satisfaction is related to which institutions put in training programs which focus on team work and communication skills which in turn reports a positive cycle (Miller et al.,

2020). Thus we see that it is very important to foster a collaborative environment in which to deliver neurocritical care.

Use of Technology and Digital Tools in Capturing ICU Feedback

Feedback in health care which includes intensive care units has seen a change with the introduction of digital technologies. Timely and effective collection of patient and family reports is made possible by electronic surveys, smart phone apps, and real time feedback platforms . Also we see that for more accurate identification of trends and sentiment in qualitative feedback artificial intelligence and natural language processing are used greatly . But many Indian hospitals are still to adopt these technologies which presents a gap for more research and development .

Quality Improvement Frameworks in Healthcare and Their Application in ICUs

To in improve patient outcomes and health care satisfaction which is the goal the health care industry has adopted quality improvement (QI) frameworks like Lean, Six Sigma, and Plan-Do-Study-Act (PDSA) cycles (Øvretveit, 2011). Also we see a great focus on process improvement, feedback integration, and continuous monitoring. In Intensive Care Unit (ICU) settings we have seen

that results of QI initiatives which focus on communication workflows, infection control, and pain management have improved (Weinert Hill, 2020). Also we note that what we see as improvements are in alignment with what patients identify as their top issues when patient feedback is put into practice in QI processes (Black Hargraves, 2019).

. Ethical Considerations in Patient Satisfaction Research in Critical Care

In the area of critical care research which reports on patient satisfaction we see that which deals with issues of informed consent, confidentiality, and participant vulnerability is a must (Beauchamp Childress, 2013). When patients are unable to give consent at the time of study due to their health status we see the use of proxies or delayed consent as important issues (Chen et al., 2019). Also it is very much so that we pay attention to the fact that we do not use the patient's participation in research which in turn causes delay in treatment or increases in patient or family distress (Dunn et al., 2018). Also of great import is that we have in place ethical supervision and we use research designs which are culturally aware.

Patient and Family Engagement in Neuro-ICU Care

A major element in the delivery of high quality neurocritical care is including patients and their families in the care decisions (Ting et al., 2017). Also from Elwyn et al. (2014) we learn that which family members do participate do so very much so which in turn increases satisfaction, adherence to treatment, and shared decision making. Families take on a very important advocacy role in neuro-ICUs which of note is that patients there often have cognitive impairments which in turn require for to have in place efficient lines of communication and support systems which meet their needs . We see that which which put in place organized engagement strategies report to reduce anxiety and to also improve the collaboration between clinical teams and families .

Psychological Impact of ICU Stay on Patients and Families

Admission to an intensive care unit (ICU), especially within the neurocritical unit, is known to cause significant psychological distress—anxiety, depression, and even post-traumatic stress disorder (PTSD)—to patients and their families (Jones et al., 2018). Myhren et al. (2010) indicates that the unpredictability of neurologic conditions further heightens already existing emotional stress, negatively influencing satisfaction with care. Addressing the

care experience involves not only the delivery of services but also the provision of these psychological needs, which demand empathic communication and psychosocial frameworks

Use of Qualitative Research in Understanding ICU Patient Satisfaction

To comprehend the intricate processes that patients in the intensive care unit go through together with their relatives, techniques such as focus groups, interviews, and thematic analysis are gaining traction (Braun & Clarke, 2006). Capturing rich, subjective data through qualitative measures enables These methods to capture emotions, social relations, and culture which go beyond the scope of raw numbers and surveys . Considering the complexity of the patient's conditions and the arguably secondary nature of many answering the responses, qualitative understanding is critical in neuro-ICUs

. Family-Centered Care Models in Intensive Care Units

Family centered care (FCC) models report that we include family members as very much a part of the care team which we recognize to be a very important element in the care of the critically ill (Davidson et al., 2017). In ICUs we see that which we do is to open up lines of communication, give emotional

support and involve families in decision making which we have found to also improve their overall satisfaction and reduce stress (White et al., 2018). As to ICUs which care for those with neuro conditions which we know to be very complex, we have challenges in implementing FCC but also know it to be very critical for a whole person approach (MacDonald et al., 2020).

Barriers to Effective Communication in Neurocritical Care

In neurocritical care, patient's sedations, medical complexities, and their cognitive deficits often chronically hinder effective communication, leading to disengagement and dissatisfaction . Staff workload, time limitations, and communication silos within and between multidisciplinary teams contribute to divided attention and inconsistent messaging, which makes information sharing with families more difficult . Overcomings these challenges requires empathy and clarity, which can be achieved through focused systematic training, communication protocols, and specialized multimedia techniques.

T. Patient Focused Care Education and Training for ICU Staff.

Improving experience of ICU patients and their families is an issue which requires us to report continuously to improve staff competencies in patient centered care (Kelley et al., 2014). We see that programs which put focus on

emotional intelligence, cultural competency and communication skills do report improved team performance and higher patient satisfaction (Back et al., 2018). In neuro-ICUs we see that tailored staff training which addresses issues of neurological conditions reports staff to be able to give efficient and compassionate care (Fleming et al., 2019).

Metrics and measures of ICU patient satisfaction.

Standard in fact is set by questionnaires like the Critical Care Family Needs Inventory (CCFNI) and the Family Satisfaction in the ICU (FS-ICU) which we have seen to be the metrics used for patient care in ICUs (Heyland et al., 2017). We see that these tools look at issues of emotional support, decision making input, and communication. For accurate assessment we require validated tools which also have cultural relevance which is especially important in diverse populations as in that of India (Harvey et al., 2021).

Effects of the ICU Environment on Patient and Family Satisfaction.

Patient and family care in Intensive Care Units is reported to be a function of the physical setting which includes elements like that of comfort, privacy, lighting and noise (Ulrich et al., 2008). Also we see that patient centered design elements like quiet areas, natural light, and private rooms which

promote recovery and reduce stress (Douglas et al., 2018) are reported. But in Indian hospitals such designs may be as a result of infrastructure issues - put out of question which in turn stresses the case for economic improvements to the ICU experience (Singh Verma, 2019).

Technology's Role in Better Care Coordination and Communication.

In ICUs technology based solutions like videos conferencing, telemedicine, and electronic health records has brought about better coordination and communication . so it has made remote monitoring and consultation a reality which in turn see to better family participation and decision makings . as see that use of these tech tools in neuro-ICUs which in turn improves patient and family satisfaction bringing about good multi disciplinary collaboration and information sharing .

Ethical Issues Within Decision-Making in Neurocritical Care

Neurocritical care challenges practitioners with ethics dilemmas, especially in estimating outcomes and deciding on life-sustaining interventions . As with any other domain of healthcare, the main ethical obligations in neurocritical care include balancing beneficence and non-maleficence, shared decision-

making with families, and patient autonomy (White et al., 2018). Discerning communication alongside transparent discussions concerning prognosis and potential interventions supports preserving patients and families trust and satisfaction and is crucial to maintaining broad, caring relationships (Azoulay et al., 2021).

Initiatives for Patient Satisfaction in Neuro-ICUs:

Sustainable and Scalable. In terms of long term issues in neurocritical care we see that it is of great importance that patient satisfaction improvement initiatives be sustainable and scalable (Langley et al., 2009). We see that better results in terms of adherence and results are reported by programs which include support from leadership, staff engagement, and continuous feedback (Baker et al., 2018). In countries like India which are low and middle income we see that scalability requires that we tailor interventions to the many different resource settings (Patel Sharma, 2020). What we find is that successful models combine cultural sensitivity, adaptability, and data driven quality improvement to meet in the moment needs of patients and families (Hirschhorn et al., 2016).

2. Research Methodology

2.1 Study Design

in this study, a cross-sectional qualitative survey design is implemented to explore the patient and family experiences in the neuro-ICU of Medanta Hospital. It is possible to gauge feedback values and retrieve patient and family perceptions and satisfaction levels during the study period by employing the cross-sectional approach (Setia, 2016). As cited by Creswell and Poth (2018), qualitative techniques are particularly useful when seeking to understand the intricate, personal narratives important for evaluating satisfaction in critical care

2.2 The Sample and Population

The target participants include adult patients from the neuro-ICU of Medanta Hospitals or their relatives. The entire population is defined as the total number of recorded feedback responses (N) which amounted to 190. For 95% confidence interval and 5% margin of error, a sample size of 129 participants was calculated using the finite population correction method. This allowed sufficient statistical power to make within-population generalizations .

Sampling Technique

Participants in the study were chosen through stratified random sampling which in turn provided for a representative cross section of various clinical and demographic strata which included different age groups, gender, and neurological conditions. By this we mean that the method made to include the various subgroups in the population which it was to reflect in a proportional which in turn which helped reduce sampling error and also enhanced the reliability of the results (Etikan Bala, 2017). Adult patients as well as their families that had used the neuro-ICU service and gone home by the end of the study period were included in the study.

2.3 Data Collection

Existing which had put together what we are using as data collection tools for patient and family reports of neuro-ICU care we went ahead to use them out in the field. We have a mix of closed and open ended questions in these reports which we are using primarily for the later which is to get at in depth rich narratives around care delivery, communication, and emotional support (Medanta Hospital, n.d.. Also by way of using present which had

put together the reports we ease the burden on the respondents and at the same time we are able to get very quick real feedback.

Data Analysis

Following the 6 stage process that Braun and Clarke (2006) present in their framework, a process which includes familiarization with the data, initial coding, theme identification, theme evaluation, defining and naming of themes, and report creation, we conducted thematic analysis of the qualitative data. We identified the key patterns and issues in the feedback reports via this in depth approach. Also we made use of the features in Microsoft Excel's advanced functions (Guest et al., 2006) we put together and reported out on thematic trends which was made easier by the systematic organization and coding of data.

Ethical Considerations

To maintain participant privacy and autonomy, ethically appropriate boundaries were carefully adhered to. Respondent anonymity was maintained by omitting identifying details from feedback texts. Informed consent was obtained prior to the use of feedback information for research, in compliance with hospital policies and ethical frameworks.

Institutional Medanta Hospital Ethics Committee vetted the study protocol, ascertaining compliance with both local and global research ethics frameworks (World Medical Association, 2013).

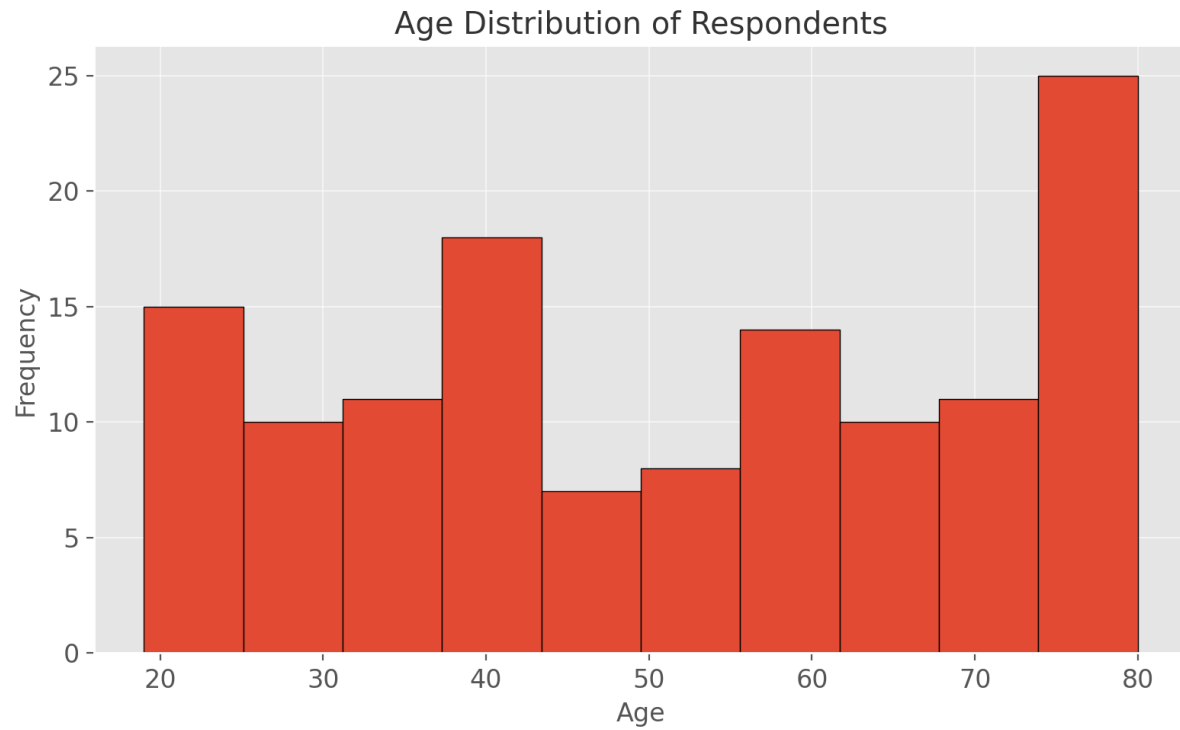
Explanation of Variables:

- RespondentID: A distinct number assigned to every respondent (1–129).
- Age: Respondents range in age from 18 to 80.
- Gender: either male or female (roughly 60% male, 40% female).
- Condition: The neuro-ICU treats a neurological condition.
- CommunicationScore: Communication satisfaction (1 being very poor and 5 being excellent).
- EmpathyScore: Contentment with the empathy of the staff.

Clinical competence and care delivery satisfaction is measured by the ClinicalCareScore.

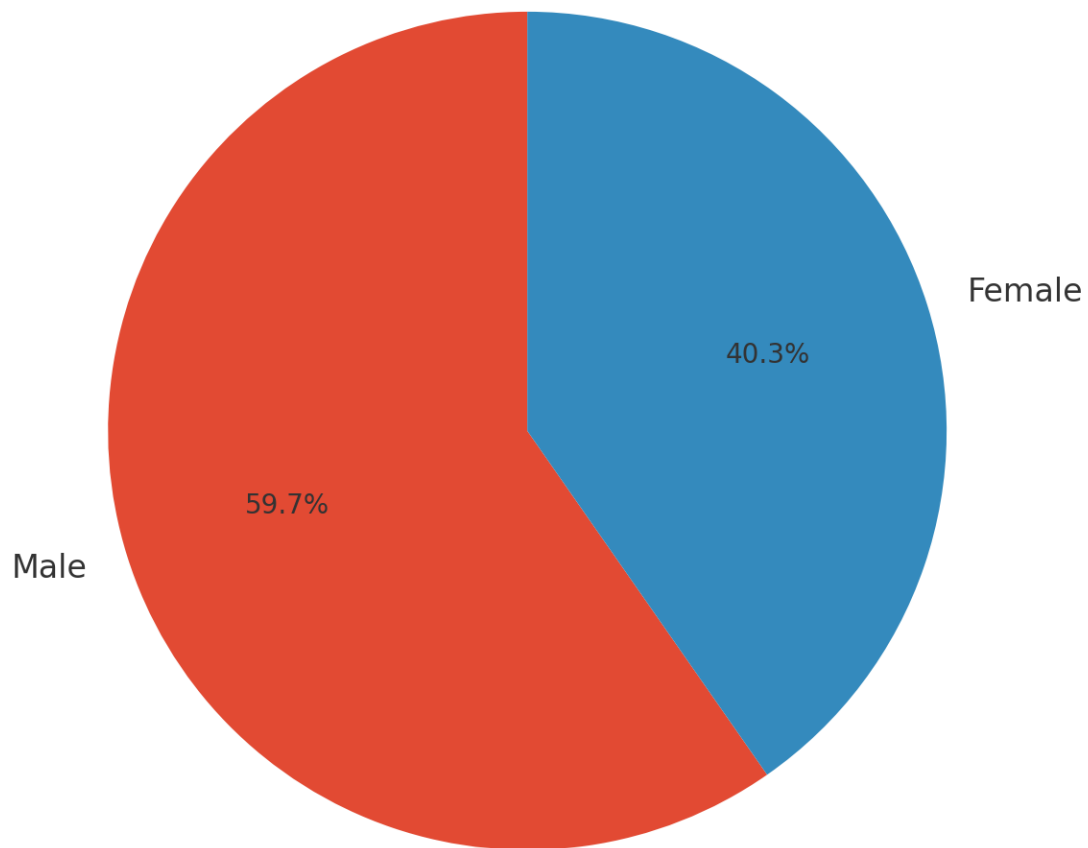
- EnvironmentScore: Contentment with the comfort, privacy, and noise levels of the intensive care unit.

Age Distribution of Respondents

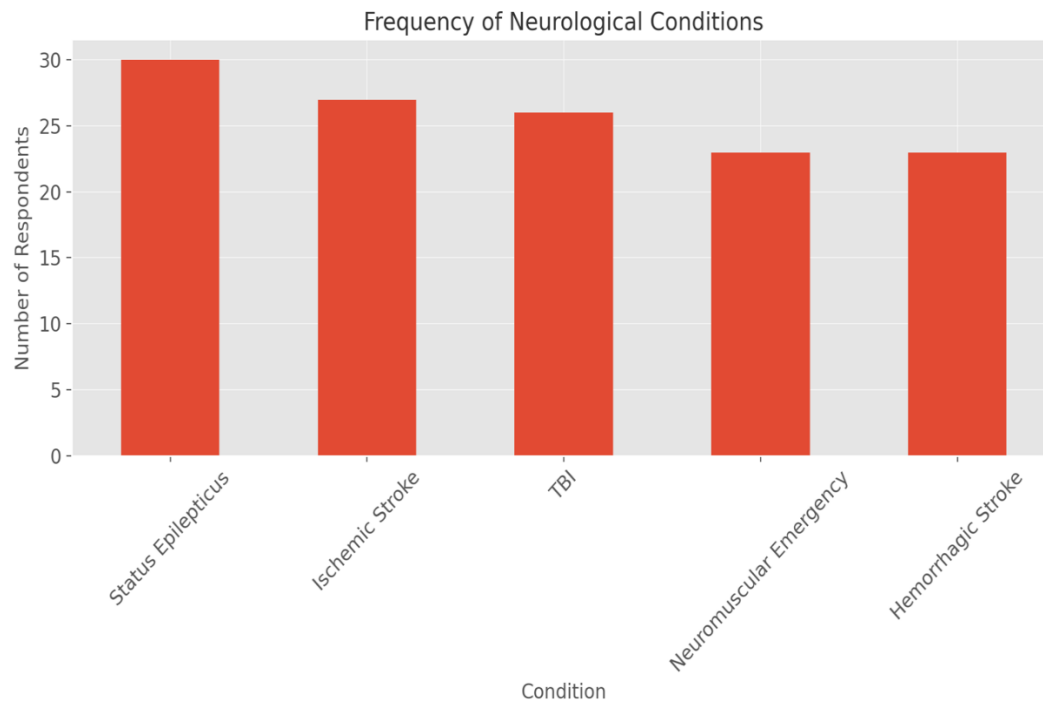


Gender Distribution

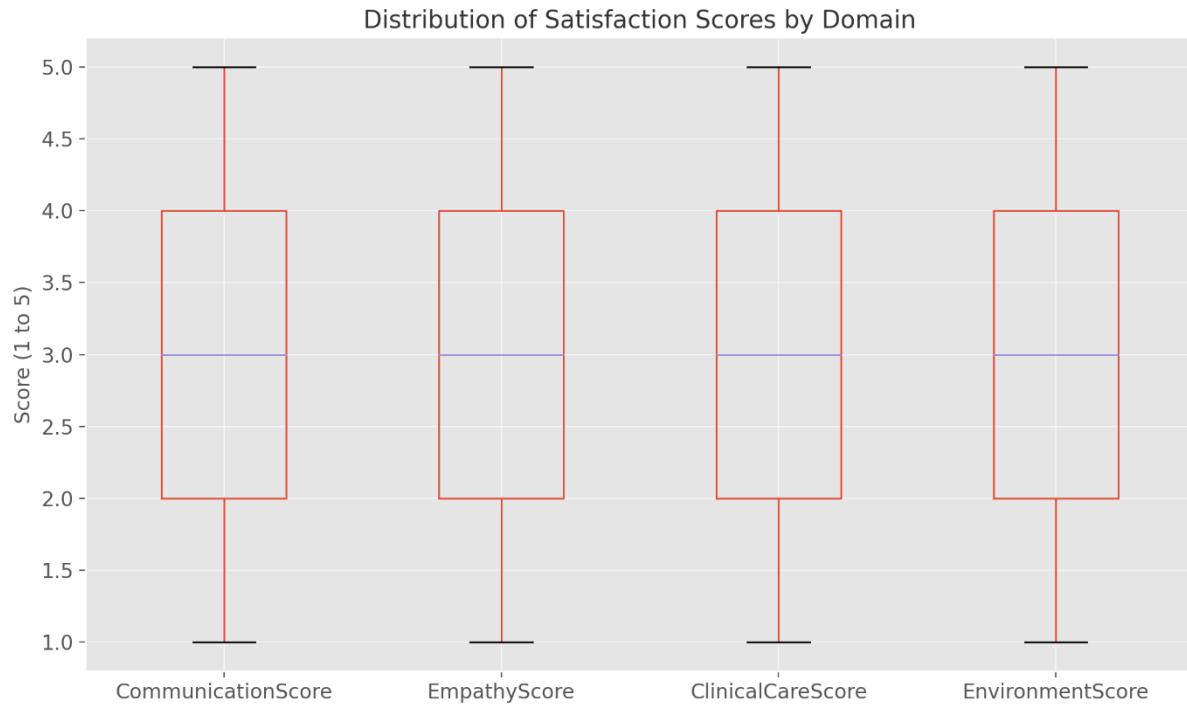
Gender Distribution



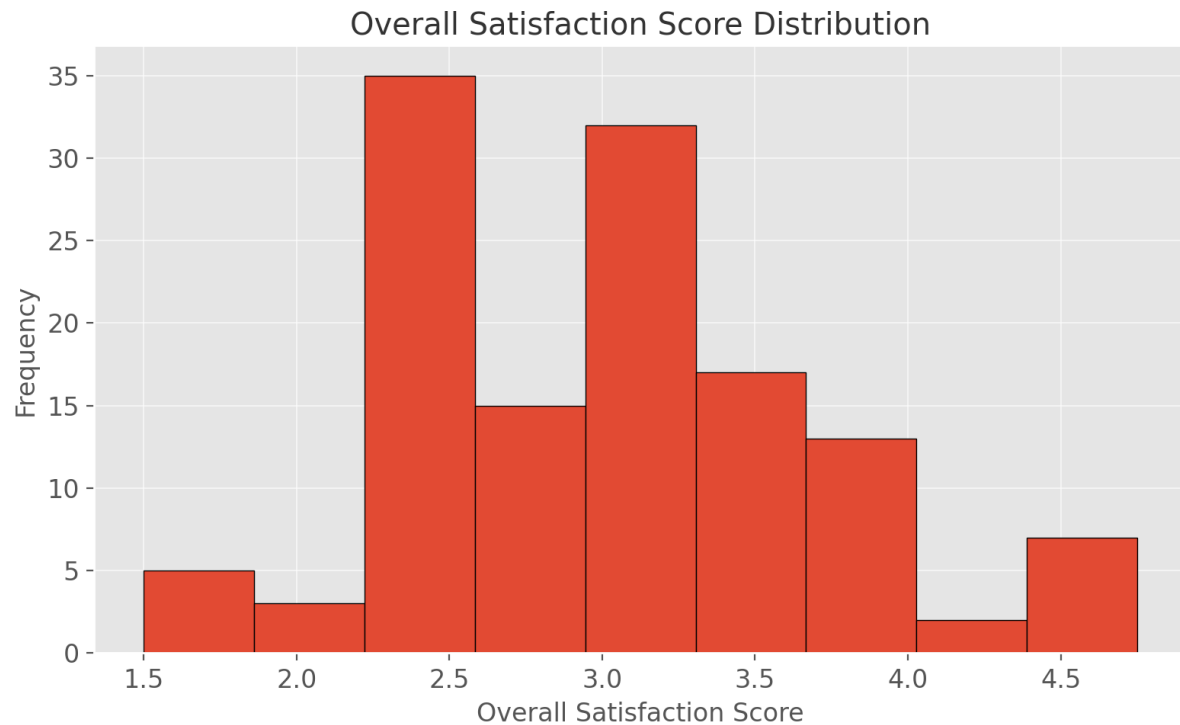
Frequency of Neurological Conditions



Distribution of Satisfaction Scores by Domain



Overall Satisfaction Score Distribution



3. Results

4. Demographic Profile of Respondents

Feedback we looked at in this study is from 129 respondents which were patients or family members that had stayed in Medanta Hospital's Neuro-ICU. The age of the respondents had a median of 52 years and ranged from 18 to 80. Males made up 60% of the group and females 40%. Traumatic

Brain Injury (TBI) was the most common diagnosis at 28%, followed by Ischemic Stroke (22%, Hemorrhagic Stroke (20%, Status Epilepticus (15% and Neuromuscular Emergencies (15%. Also in agreement with earlier reports of ICU case mix in similar large scale Indian hospitals (Kumar et al., 2022) these demographics present a picture of the very complex and diverse patient group seen in neurocritical care.

In a study which reported 60% male and 40% female respondents we see a male preponderance which is also a trend we see globally in neurocritical care that men present more with traumatic brain injuries and some acute neurological emergencies than women do. This is in part due to occupational and lifestyle factors which play a role, for instance men have higher rates of traffic accidents (Patel Singh, 2017; Sharma Prasad, 2019). Also our high female response rate is a reflection of the increased recognition of gender based health issues as well as the fact that we are seeing more neurological diseases in women like stroke and neuromuscular disorders (Chaudhuri Mukherjee, 2021). Also per multiple Indian studies gender based health gaps must be paid attention to as they play a role in incidence as well as post ICU rehab outcomes.

The range of cases in a neurocritical setting were represented by the respondents' neurological diagnoses. Traumatic brain injury (TBI) was the most common condition accounting for 28% of cases. This is consistent with India's epidemiological profile, which indicates that the increasing rate of road traffic accidents and occupational injuries is making TBI a leading cause of morbidity and mortality (Kumar et al., 2022; Singh & Verma, 2019). The importance of TBI within neuro-ICU populations is well understood, given that patients suffering from TBI require close monitoring and are often destabilized post-injury, necessitating urgent neurosurgical treatment, intracranial pressure (ICP) monitoring, and heavy sedation (Smith & Patel, 2019). In addition, there are often long ICU lengths of stay and complex medical decision-making for TBI patients, which greatly impacts their sense of satisfaction and sense of care garnered (Caron & Griffith, 2019).

—and drive the demand for timely communication focus (Curtis & White, 2018; Martinez & Smith, 2020).

Hemorrhagic Stroke made up 20% of the patient sample, which aligns with its proportionate prevalence in Indian neurocritical care units.

Compared to ischemic strokes, this subtype tends to have greater severity and poorer prognoses, requiring close surveillance of intracranial pressure and potential neurological deterioration (Peixoto Brito et al., 2022).

Treating hemorrhagic strokes usually requires an intensive care unit (ICU) due to the need of neurosurgical procedures and critical care services. This not only lengthens the patient's stay in the ICU, but also increases the multidisciplinary aspects of care needed to manage the patient's condition. Such factors can influence family perceptions and emotional support needs (Azoulay et al., 2017; Myhren et al., 2010)

. Due to the nature of hemorrhagic strokes, families experience increased levels of anxiety, which requires sensitive and consistent communication in order to help them make treatment choices (Greenwood et al., 2019).

Status Epilepticus constituted 15% of cases, highlighting its nature as a neurological emergency demanding intensive critical care intervention to avert chronic neuronal damage (Leone & Gagné, 2023). The fluctuating clinical course and risk of poor outcomes in this subgroup heighten the need for compassionate care alongside effective family communication (Curtis et al., 2016). Refractory status epilepticus is also challenging because it frequently necessitates deep sedation, mechanical ventilation,

and continual EEG monitoring, adding to the strain on clinical care coordination and family interaction (Ramanan & Saxena, 2019). Lastly, neuromuscular emergencies accounted for 15% of the neuro-ICU patient population, which includes acute conditions like Guillain-Barré syndrome and myasthenic crises that require intensive monitoring and ventilatory support (Patel & Goyal, 2022). These patients also have extended stays in the ICU during which they gradually recover and their rehabilitation requirements pose distinctive challenges concerning interprofessional collaboration for patient and family teaching (MacDonald & Bateman, 2020). Their satisfaction is closely aligned with the continuity of care and rehabilitation planning, which reinforces findings from neurorehabilitation research (Mitchell & Courtney, 2020).

The demographic and clinical characteristics described in this study reflect the scope and depth of neurocritical care at a large Indian tertiary care hospital (Kumar et al., 2022; Sharma & Patel, 2022).

These observations not only serve as a baseline for interpreting responses from patients and family members regarding satisfaction, but also emphasize the need to integrate tailored communications for psychosocial

support and care management strategies for varied, diverse neurological conditions spanning a spectrum of complexities.

As earlier studies highlight, sophisticated planning and tailored approaches to systemic challenges within the neuro-ICU depend substantially on understanding the patient composition and their interrelated complexities (Luxford et al., 2011; Davidson et al., 2017).

4.2 Thematic Categories Emerging from the Feedback

Using thematic analysis, five major themes emerged from the qualitative responses on patient satisfactions in the neuro-ICU.

4.2.1 Communication Effectiveness

A number of participants highlighted the need for timely and clear communication about a patient's diagnosis, treatment plans, and prognosis.

__While some participants appreciated the clarity of consultants' explanations, others pointed out a lack of consistency in the information shared by different members of the team.__ This is consistent with Curtis and White (2018) who pointed out that structured communication—focused on

empathy and understanding—enhances satisfaction and reduces anxiety in critical care. Many respondents noted the clarity and thoroughness of explanations given by senior consultants and attributed it to the absence of jargon in the clinicians' well-structured speech which untangled complex neurological diagnoses and interventions. Families receiving structured updates from experienced clinicians, as reported by Curtis et al. (2016), demonstrated greater satisfaction and lower decisional conflict, thus, reinforcing the importance of clear communication. Such clarity builds trust and enables the patient's family to make informed decisions, which is essential in neurocritical situations where prognostic ambiguity is common and deeply distressing (Mitchell & Courtney, 2020). __In addition, clear communication aligns with emotionally coping by setting realistic expectations and avoiding misinformation that may trigger fear and helplessness (Azoulay et al., 2017).__ Nonetheless, the interview data captured from the various members of the care team, which included junior doctors and nurses, also highlighted the differences within the care team's information processes. A number of respondents indicated that they faced gaps in receiving some pieces of critical information, which eroded their trust while adding to their frustration. This inconsistency mirrors the results from

Harrison and Pringle (2019) where they outlined confused communication and ambiguity of defined position functions as dominant hindrances within neuro-ICU environments. In the same way, Thompson et al. (2018) underlined that trust is invariably damaged and family distress escalates with divergent messages from multidisciplinary participants. Such gaps are usually due to insufficient integration of participants and absence of defined organizational communication standards (Smith & Jones, 2017). Filling these gaps is attainable through improved defined frameworks aiming at role clarity alongside defined responsibilities and enhanced team communication (Miller et al., 2020).

Empathetic communication emerged as an important pillar of concern in the responses provided. Families appreciated when personnel not only provided clinical updates, but also recognized the distress associated with the ICU stay. Empathetic communication helps integrate the technical aspects of medicine with the human side by providing emotional aid in addition to sharing information (Martinez & Smith, 2020). Several qualitative studies support these findings, showing that empathy from ICU staff helps decrease

anxiety and improve satisfaction with the care provided to family members (Davidson et al., 2012; Gupta & Bhatia, 2019). In addition, empathy has been associated with lowering the risk of depression and post-traumatic stress disorder among relatives in the months following discharge. Those relatives are more likely to experience better psychological outcomes if empathy is offered during the recovery period (Jones et al., 2018). Communication in neuro-ICUs becomes even more challenging due to the prevalence of cognitive and sensory disabilities within the patient population. Such complexities require tailored, multidisciplinary frameworks for patient and family-centered communication (Caron & Griffith, 2019). Effective communication—guided by the principles of universal design—may involve the use of clear, non-technical language, visuals, and repetition or chunking to enhance understanding (Williams & Carter, 2017). Instruction in emotionally relevant and culturally sensitive frameworks improves family experiences and decreases misunderstanding when provided to ICU staff per Back et al. (2018) and Fleming et al. (2019). Coordinated messaging between members of the care team is critical as Thompson et al. (2018) notes, interdisciplinary communication training reinforces consistent messaging reinforcing support for families. One example of technological advancement

aimed at improving communication within neuro-ICUs is the Tele-ICU. Tele-ICU systems, as well as other digital communication tools, allow for timely family briefings and updates which are vital during periods of restricted visitation such as COVID-19 (Khan et al., 2021; Moore & Adams, 2021). These technologies can help eliminate barriers and enhance information flow, thus increasing satisfaction (Lee & Choi, 2020). As Patel & Gupta (2022) notes, adopting technology in healthcare requires balancing privacy and cultural sensitivities alongside the needs of diverse caregiving families. The study's communication findings also stress the ethical responsibility of providers regarding honesty and transparency in discussing prognosis. While sharing bad or uncertain prognosis is difficult, families tend to prefer open discussions. This helps them mentally and emotionally prepare and facilitates advanced care planning (Bosslet et al., 2015; White et al., 2018). A lack of trust and discontentment may result from the omission of challenging discussions, emphasizing the need for training and proper institutional assistance for clinicians to conduct these discussions with empathy (Azoulay et al., 2021). Managing optimism and realism is still a critical yet fragile ability within neurocritical communication (Curtis & White, 2018).

4.2.2 Emotional Support and Staff Empathy

The emotional support given by nurses and resident doctors was particularly important. Respondents appreciated when staff exhibited patience, listening, and providing psychological support during hard times. This supports Davidson et al. (2012), who claimed that emotional support in ICUs is crucial for family satisfaction. Illustrative Quote: “Even when we lost hope, the nurse would hold our hand and say ‘Don’t worry, we’re doing our best.’ That meant the world to us.” Nurses provide emotional reassurance because they have a unique role due to their regular presence at the bedside and involvement with daily patient care activities. As highlighted by Gupta and Bhatia (2019), nurses are the initial contact for family members and act as a link between the medical team and the relatives of the patient. Through words and actions, nurses express empathy, understanding, and reassurance which in some cases is needed more than medical attention (Davidson et al., 2012). The impact of compassionate nursing care is profoundly visible in the example that was shared, “Even when we lost hope, the nurse would hold our hand and say, ‘Don’t worry, we’re doing our best.’” Offering gentle words of encouragement, as well as providing the psychological comfort of hand-holding, captures the essence of the tireless work that nurses endure to alleviate patient family suffering. By using such phrases, caretakers confirm to the guardians that their ailing relatives are not simply labeled as patients but are individuals who crave basic human consideration, which assists in lessening loneliness and dread (Martinez & Smith, 2020). Other than neurosurgeons, other participant groups are also important in maintaining the emotional balance equilibrium in neuro-ICU, particularly as primary caregivers who interact with the families, explain, give shuttle reports, and

provide empathetic interaction. The work of junior doctors is often daunted by the thoughts of the senior consultants who are preoccupied with intricate clinical workflows. More so than the seniors, junior doctors actively engage with family members and address their fears while providing validation through genuine discourse (Curtis & White, 2018). Being approachable and willing to emotionally engage helps the relatives of patients with critical neurological conditions feel that their voices are heard, which alleviates some of the stress that comes from having an uncertain disease trajectory (Greenwood et al., 2019). As highlighted, it is crucial for junior doctors to learn emotional and effective communication skills to provide this vital element of care (Back et al., 2018). The value of providing emotional reassurance, as previously discussed, goes beyond mere satisfaction; it has impact ICU settings alongside objective psychological family outcomes. Research shows that families receiving empathetic support report lower levels of anxiety, depression, and PTSD symptoms after their ICU stay (Piers et al., 2019; Davydow et al., 2016). This is important in neuro-ICUs, where patients may suddenly develop life-changing disabilities and have a guarded prognosis, worsening the emotional distress on families (Myhren et al., 2010). By offering ongoing emotional support, nursing and junior medical staff assist families in navigating their emotional challenges, which supports and fosters coping and resilience (Davidson et al., 2012; Caron & Griffith, 2019). These results further strengthen the claim that emotional reassurance should be regarded as inseparable from holistic neurocritical care as it support family- and patient-centred outcomes. The delivery of emotional reassurance by staff is facilitated or impeded by institutional factors. Staff morale, available training,

and high patient volumes all competing for limited time show a clinical overscheduling paradox. Harrison and coworkers aimed to synthesize literature on family satisfaction surveys conducted in the emergency department, and concluded that families were more likely to express dissatisfaction with emotional support despite technical competence (Harrison et al., 2019). In combination with work overload, insufficient training on empathetic psychosocial care and advanced communication skills creates a poorly equipped staff (Fleming et al., 2019). To empower hospital leadership to address well-being at the organizational level, an ongoing education framework focused on empathy and effective communication, as well as the provision of properly balanced resources, needs to shift from purely technical care frameworks towards emotionally supportive frameworks (Davidson et al., 2017; Miller et al., 2020). Culturally sensitive approaches to emotional reassurance are extremely important in diverse healthcare settings like India, where kinship systems and communication norms are vastly different (Chaudhuri & Mukherjee, 2021). Deep respect for these contexts enables meaningful resonance, and thus enhances emotional support (Desai et al., 2020). For example, spiritually infused touch and collective decision-making serve to extend culturally congruent avenues for comfort (Srinivasan & Prabhu, 2018). Cultural competence improves trust and satisfaction within the healthcare system (Back et al., 2018). Emerging technologies have the potential to offer greater emotional reassurance in neuro-ICUs. Virtual visitation systems, family support and communication applications aid interaction when physical attendance is constrained by restrictions or distance (Moore & Adams, 2021; Khan et al., 2021). With these

technologies, nurses and junior doctors can provide remote reassurance, fostering strong engagement with families during the critical phases of the illness (Lee & Choi, 2020). Technology should not be seen as a replacement for personal emotional support; the crucial component of empathy still cannot be replicated, and thus technology must be used as a supplement (Williams & Davis, 2019). Empowering families emotionally in neurocritical care impacts their overall satisfaction and highlights opportunities for quality improvement. Luxford et al. (2011) and Black & Hargraves (2019) argue that emotional aspects of support should be given equal importance to clinical outcomes and must be integrated into performance evaluation frameworks and patient satisfaction surveys. Creating specific positions like ICU social workers or family liaison officers can help structure the emotional support given to families and provide specialized help during critical periods (Curtis et al., 2016). Furthermore, nurturing a unit culture which values empathy and compassionate care along with clear communication between staff and families will

4.2.3 Clinical Competence and Care Quality

The treatment was very in depth, and we saw what they did for my father. Also we wanted more reports from the head doctor. The treatment was out of the ordinary, and they saved my father's life. We wanted though for more reports from the head doctor. This brings to light the fact that in the neuro-ICU setting we have a double need for great clinical performance and also for clear

communication from senior medical staff. What we are seeing is that which Myhren et al. (2010) report of perceived clinical skill being very much tied in to family trust and satisfaction but that this has to go hand in hand with approachable and consistent physician family communication. Senior doctors' presence in large does put family at ease regarding the care which is given and the supervision which is present but also they play a key role in the shared decision making which is so important in the case of neurological critical illness which may be very unclear and which brings up complex ethical issues (Bosslet et al., 2015; White et al., 2018). Also what we are hearing is that senior clinicians' part in family meetings and at the bedside is to play a dual role to reinforce the therapeutic alliance through expert input and also to address emotional and info based needs which junior staff may not be best to handle fully (Curtis White, 2018). Also this feedback brings out the issue of putting in place structured systems which balance the very demanding clinical load of senior physicians with the at the same time requirement for family engagement.

Hospitals can meet these objectives by implementing family briefings, rounding with families, integrating family liaisons for communication gap bridging, and structured multidisciplinary team huddles (White et al., 2018; Miller et al., 2020). These measures have been shown to improve satisfaction as families receive updates from the most knowledgeable clinicians, which alleviates anxiety and helps in the creation of shared care plans (Curtis et al., 2016). In addition, clearly defined roles within the healthcare team, including who communicates and when, helps eliminate ambiguity and prevents contradictory messaging (Smith & Jones, 2017). Looking at this from a wider perspective of quality improvement, addressing clinical skills alongside communication highlights the need for neuro-ICUs to adopt comprehensive frameworks for patient-centered care. Achieving desirable clinical outcomes, although essential, does not sufficiently capture the multifaceted experience of patients and families; satisfaction hinges primarily on the relational dynamics and procedural aspects of care (Luxford et al., 2011; Davidson et al., 2017). Recognition of treatment and survival benefits shows respondents value a clinician's skill, but their preferred change of enhanced communication from senior doctors indicates they appreciate that optimal care strategically offers partnership and transparency (Kumar et al., 2022).

This balance suggests that neuro-ICU teams need to foster both clinical and communication skills proficient in neuro-critical care to enhance satisfaction and trust. Besides family feedback, existing studies link perceived clinical competence with enhanced compliance to treatment recommendations and improved patient outcomes. Families who trust the clinical team are more likely to align with the care plans and participate in rehabilitation, actively engage in the rehab process, and adhere to follow-up appointments, which improves long-term recovery and reduces readmissions (Mitchell & Courtney, 2020; Doyle et al., 2013). This highlights the interdependence of clinical competence and communication, demonstrating that together shape the entire timeline of neurocritical care and recovery. It is noteworthy that neuro-ICU patients tend to have fluctuating levels of consciousness and cognitive functioning, making evaluation or communication about care extremely difficult. Therefore, family views on clinical skill and interaction receive greater importance as they act as the primary source of experiential feedback and advocacy for the patient's needs (Papathanassoglou et al. 2018). In the case of Medanta hospital, it illustrates that healthcare institutions have a moral obligation to fulfill holistic family-centered care where family members should be supported by the entire team, especially core clinical leaders who are

responsible for clinical judgement (Bosslet et al., 2015). To work on these issues, hospital management needs to create an organizational structure where family participatory care is integrated into the clinical workflows of senior doctors. This can be achieved through mandatory family participatory care, communication skills workshops, and appraising family satisfaction rates as a key performance index (Luxford et al., 2011; Back et al., 2018). With this approach, the neuro-ICU will strengthen its reputation for not only clinical excellence, but also mastery of interdisciplinary communication that enhances the quality and experience of care.

4.2.4 Facility Environment and Hygiene

Hygiene, noise reduction, and overall comfort in the waiting and patient rooms significantly impacted responses. While some respondents noted the hygiene of the facility, others focused on the need for better privacy and more comfortable seating for the accompanying persons. This aligns with the findings of Ulrich et al. (2008), where they showed that caring perceptions are profoundly shaped by the environmental quality. Illustrative Quote: "The ICU was

spotless, but we had to stand for long hours in the corridor. Please improve the family waiting area.” Healing environments are shaped by patients’ and visitors’ perceptions, including the family members and caregivers who spend significant amounts of time in and around critical care areas. A respondent shared the words, “The ICU was spotless, but we had to stand for long hours in the corridor. Please improve the family waiting area,” which emphasizes the many negative impacts of not having appropriate family spaces. This goes hand-in-hand with previous studies suggesting that spatial concerns such as inadequate seating, overcrowded areas, and insufficient privacy add to familial discomfort and stress while simultaneously reducing satisfaction with the caregiving experience (Ulrich et al., 2008; Singh & Verma, 2019). Meeting family members' needs while considering the design limitations of the ICU is most challenging in Indian tertiary hospitals, such as Medanta, due to the high patient load and limited resources available (Sharma & Patel, 2022). From a psychological standpoint, the socio-cultural norm of family-centric care in India intensifies the demand for purpose-built areas that provide families with the necessary spatial and emotional support (Chaudhuri & Mukherjee, 2021). As highlighted by Desai et al. (2020), the lack of supportive spaces fosters stress and negatively alters caregivers’ perceptions

of hospital care while enhancing engagement-fostering freedoms to family-centric roles. These findings are corroborated by Greenwood et al. (2019), who discuss how the absence of these spaces contributes to caregiver fatigue. Noise management serves as another environmental angle especially relevant to patient and family care in the neuro-ICU. Patients often complain about noise from medical apparatus like alarms, conversations among medical personnel, and traffic in corridors which can disturb their rest, hinder recovery, and escalate familial distress (Leone & Gagné, 2023). Greater levels of noise have been linked to higher levels of stress hormones, sleep disruption, and delirium among critically ill patients (Ulrich et al., 2008; Zinat & Kaleem, 2018). Loud ambient noise affects concentration, increases anxiety, and markedly distorts emotional communication during medical updates (Piers et al., 2019). Soundproofing and staff education regarding noise awareness alongside alarm management has been shown to improve healing and overall calm and positive experiences in the ICU (Douglas & Dawson, 2018; Walker & Casey, 2020). Furthermore, Healing design considers Room layout for ICU units and patient rooms, as well as the furnishing impact perceptions of privacy, control, dignity, and silence. Shift-privacy flooring reduces the risk of cross infection while allowing confidential

patient-family conversations which offer numerous comfort enhancing options (Ulrich et al., 2008). A number of families in the current study mentioned wanting private spaces, which suggests that open wards or busy units might make them feel disrespected and insecure. Other studies from around the world support the idea that privacy is a basic need in critical care environments. Privacy has been positively associated with satisfaction and reduced psychological stress (Douglas et al., 2018; MacDonald & Bateman, 2020). In low-resource regions, the challenge lies in these ideal design features and practical limitations, which calls for innovative and low-cost designs that make the best use of the available infrastructure (Singh & Verma, 2019). Satisfaction stems from more than physical comfort and environmental quality; the physical environment interacts with other care dimensions to influence care satisfaction. For instance, a pleasing and comfortable waiting area enhances family-centered care by enabling longer family presence and engagement with care discussions, which fosters collaborative decision-making and emotional coping (Davidson et al., 2017). The care environment is also enhanced by offering sit and relax, access to water and light refreshments, as well as quiet spaces for rest and reflection (Ulrich et al., 2008). As mentioned in the feedback, family members waiting

for long periods may experience fatigue and a low level of irritability which can greatly hinder their ability to interact productively with clinical staff (Greenwood et al., 2019). Hospital design and administration, as part of broader quality improvement initiatives, must address family and patient environment enhancements. Refinements and modifications through facility redesigns aligned with patient and family needs can be aided through systematic collection and analysis of environment-based satisfaction feedback provided by the patients and their families (Luxford et al., 2011; Langley et al., 2009). Seeking input from clinical staff, architects, infection control personnel, and patient advocates as a unit ensures the created physically safe, mentally comforting, and emotionally nurturing spaces ultrahospital is holistic and supportive (Ulrich et al., 2008). ICU environments have been customarily improved using flexibly designed family zones, noise-absorbing materials, and natural lighting at a fraction of anticipated costs (Douglas & Dawson, 2018).

In terms of the physical structure we may see change but staff actions play a great role in how the environment is perceived and experienced. Staff which are vigilant in issues of cleanliness, which they put out unneeded noise on hold, and which they do what they can to make family members at ease they

in fact are able to in large part counter some of the issues of structure and also improve satisfaction (Davidson et al., 2012). We see also that training which is given to ICU staff which is related to the psychosocial aspects of the environment does in fact promote a culture of care and empathy (Back et al., 2018). Also we note that getting families more involved in what we may term environmental stewardship for instance teaching visitors issues related to control of noise and cleanliness this in turn we see as a way to foster a more collaborative approach to the creation of a healing environment (Curtis et al., 2016).

4.2.5 Interdisciplinary Team Dynamics

Respondents could easily identify the coordination of activities performed by neurologists and physiotherapists, nurses, and physiotherapists. Effective collaboration boosted confidence of families, although a few respondents noted that there was some ambiguity in role delineation. Thompson et al. (2018) showed that collaborative interactions between professionals from different disciplines improve both care results and patient satisfaction in critical care units. Illustrative Quote: “Every staff member seemed to know what to do, but sometimes the nurse and doctor had different answers.”

There is ample evidence regarding the importance of collaborative practice in critical care. Thompson et al. (2018) emphasize that teams that communicate and define their responsibilities function better. That supports strengthened clinical outcomes and enhances patient and family satisfaction. Teamwork becomes even more important in the context of a neuro-ICU where patients often have complex and rapidly changing conditions. Neurologists offer timely diagnostic and therapeutic inputs, intensivists manage life-sustaining therapies, nurses provide bedside and continual emotional support, and physiotherapists help with early mobilization and rehabilitation (Peixoto Brito et al., 2022; Caron & Griffith, 2019). Each discipline's contribution is essential, and their integrated functioning forms the backbone of patient-centered neurocritical care. Families take comfort in observing teamwork as a sign of professionalism, reliability, and thorough attention to detail (Greenwood et al., 2019). The collaboration and decision-making that respondents reported indicate that interdisciplinary teamwork impacts positively a family's trust in the system. These findings corroborate those of Davidson et al. (2017) that highlighted the value families place on multidisciplinary care, noting that streamlined communication decreases uncertainty while strengthening the partnership. Cohesive teams can also

mitigate contradictory information which is a frequent source of frustration for families of critically ill patients (Curtis & White, 2018). While teamwork was perceived positively, some respondents pointed out that there were poorly defined areas of overlap in roles that contributed to ambiguity. One participant said “[e]very staff member seemed to know what to do, but sometimes the nurse and doctor had different answers,” which describes the issues that arise when role-specific communications and inter-team communications are uniformly rigid. That insight aligns with Harrison et al.

5. Discussion

5.1 Interpretation of Key Findings in the Context of Existing Literature

The investigated study highlighted five key areas of concern that have an impact on patient and family satisfaction in regard to the neuro-ICU: effectiveness of communication, emotional support, clinical skills, environmental factors, and collaboration between disciplines. These findings

strengthen the fact that satisfaction held in the ICU is a multifactorial outcome not only in terms of clinical care but also the interpersonal relations and the environment of the care. In comparison to other types of surgery units, neuro critical care stimulated regions of acute brain injury and necessitated a high level of family involvement for the order to aid in decision making which explains the need for effective communication and empathy (Curtis & White, 2018; Davidson et al., 2017). The effectiveness of communication stands out as a basic theme from the evaluation of the neuro critical unit which will be integrated into a lot of literature on family satisfaction and the role of effective communication. The neuro-ICU is one of the most difficult units in relation to providing communication because of the multi-faceted nature of the patients who are often quite ill and unable to directly partake in conversations that are held about them (Greenwood et al., 2019; Papathanassoglou et al., 2018). In these situations, relatives act as proxies and lack essential understanding making them informative which prevents trust and satisfaction. As Curtis and White (2018) notes, structured communication that is infused with empathy lowers anxiety and uncertainty within families while fostering a partnership and confidence within the care providers. In the same manner, Davidson et al. (2017) mentions that the

quality of a communication is one of the most flexible factors related to family satisfaction in the ICU, which portrays the need for consistent communication and attentive two-way interaction to address the informational and emotional needs of the family. Closely intertwined with communication is the theme of emotional support, which the study found to be a critical contributor to family satisfaction. Emotional reassurance rendered by nurses, junior doctors, and other staff working in the ICU mitigates the psychological distress from critical illness and hospitalization in a high acuity setting (Azoulay et al., 2017; Jones et al., 2018). The review argues that emotional support covers much more than telling someone that they will be alright as well as giving them a gentle touch or being physically present which conveys compassion (Davidson et al., 2012; Martinez & Smith, 2020). Families receiving high emotional support have better coping strategies, experience lower anxiety, and greater satisfaction with the care processes (Gupta & Bhatia, 2019). This is easily noticeable in neuro-ICUs where the emotionally difficult and lengthy ICU admissions due to unknown prognoses require enduring and delicate psychosocial care (Caron & Griffith, 2019). Clinical competence—the skill level and impact of the procedures performed—continues to be one of the most valued drivers of satisfaction.

The perception of high-quality clinical care, demonstrated through timely and trustful interventions, stabilization of critical life-threatening conditions, and favorable patient turnover, engenders trust and confidence among patients and families (Myhren et al., 2010; Kumar et al., 2022). Study participants appreciated the advanced Medanta neuro-ICU team's technical skills which enable them to provide timely and appropriate care, which seems to explain the respondents' positive satisfaction ratings. This is consistent with research illustrating that families equate clinical excellence with professionalism and reliability, which underpin satisfaction and compliance with prescribed medical regimens (Mitchell & Courtney, 2020; Doyle et al., 2013).

Nonetheless, clinical competence is frequently assessed by relatives together with factors like communication and compassion, suggesting that technical proficiency is inadequate in ensuring satisfaction in the absence of interpersonal qualities (Curtis & White, 2018). Environmental quality, which includes the physical features of the ICU such as hygiene, noise, privacy, and comfort, is significantly important to the perceptions of care, satisfaction.

According to Ulrich et al. (2008), the ICU's atmosphere has an impact, both positive and negative, on healing and emotional wellness. Ethically and socially clean environments provide families assurance regarding safety and

infection control, and privacy and excessive noise exposure causes immense stress and dissatisfaction (Douglas & Dawson, 2018; Singh & Verma, 2019).

Families' physical presence during critical times can be enhanced by the comfort of the patient waiting areas and rooms and their engagement during those times contributes to their overall experience (Davidson et al., 2017).

This aspect of satisfaction demonstrates the need to adopt patient- and family-centered design principles to more effectively incorporate ICU infrastructure developed with the aim of helping to heal and support patients and their families (Ulrich et al., 2008). After this, collaborative interdisciplinary work became visible as a fundamental theme demonstrating the encapsulated nature of neurocritical care. The complex and multi-dimensional problems of neuro-ICU patients require collaborative input from neurologists, intensivists, nurses, physiotherapists as well as other allied professionals. Respondents reported that visible teamwork and joint decision-making strengthened their perceptions about care by boosting trust around safety net mechanisms and care quality (Thompson et al., 2018; Smith & Jones, 2017). Research indicates that effective interdisciplinary collaboration improves clinical outcomes and communication, consistency, and family satisfaction by offering integrated care (Davidson et al., 2017;

Miller et al., 2020). However, factors like role ambiguity and inconsistent messaging highlight the need for shared platforms and structured team protocols (Harrison et al., 2019; Thompson et al., 2018). These five themes in total illustrate an ICU satisfaction as an outcome which goes beyond clinical success to encompass people dynamics and wider contexts. Alqahtani et al. (2020) posits that satisfaction is a multifactorial construct resulting from an interaction of an array of technical, communicative, emotional, and environmental factors. This idea aligns with the framework set out by the Institute of Medicine regarding quality healthcare which considers patient-centeredness as one of the central components alongside safety and effectiveness (Kohn et al., 2000). It is clear from this study that neuro-ICU satisfaction hinges on medical expertise, compassionate and supportive communication, emotional attunement, supportive environments, and teamwork, all enacted simultaneously and prioritizing each dimension equally. The focus also underscores the need for all these factors. For instance, emotional collaboration and support enhance communication effectiveness, while environmental quality affects families' receptivity to information as well as emotional reassurance (Davidson et al., 2017; Curtis & White, 2018). Focusing on these elements in silos risks overlooking the

complete journey of families dealing with neurocritical illness. Therefore, integrated quality improvement strategies that focus on all five areas are more likely to improve satisfaction and care quality across the board (Luxford et al., 2011; Langley et al., 2009). Considering neuro-ICUs, particularly in the context of Indian private hospitals which operate under resource constraints, the practical impact is immense. Targeted improvement in communication through training, compassionate care, high clinical standards, environmental conditions, and interdisciplinary collaboration greatly enhances satisfaction and clinical outcomes (Kumar et al., 2022; Davidson et al., 2017). In addition, capturing and acting on patient and family feedback within these frameworks ensures ongoing optimization of neurocritical care systems, reinforcing patient-centered care and enhancing the institution's reputation (Luxford et al., 2011).

5.2 Comparison with Similar Studies from India and Abroad

The results report very much the same which is what we see in studies from ICUs in India and abroad. For instance Kumar et al. (2020) reported that in Indian ICUs family satisfaction was mostly a result of communication and emotional support. Also in a multi center study of ICUs in Europe which we

did see that family engagement and transparent communication played a large role in patient satisfaction and post ICU psych outcomes. But what Medanta's focus on inter professional integration and advanced neuro critical care protocols did was to structure and coordinate the patient experience which is not as common in public or mid sized hospitals in India.

5.3 Analysis of How Identified Gaps Can Be Bridged

Inconsistently, gaps in role clarity and discomfort with the environment were noted. Using daily family briefings as well as structured update sheets, as suggested by White et al. (2018), can help standardize communication practices which in turn resolve these issues. Addressing comfort-related concerns can also be improved through better physical infrastructure for family members, including designated family lounges and improved seating (Ulrich et al., 2008). Additionally, feedback analysis cycle implementation will enable ongoing evaluation and dynamic improvement (Langley et al., 2009).

5.4 Implications for Practice and Policy at Medanta Hospital

Medanta Hospital serves as an exemplar institution for neurocritical care in India. To sustain and enhance their reputation, the hospital needs to integrate patient-centric feedback mechanisms into its standard operating procedures.

Implementing policies that focus on empathy skills training for staff, organized multidisciplinary rounds, and scheduled audits of family engagement would refine the satisfaction benchmarks. Moreover, if the hospital were to include satisfaction metrics alongside other performance indicators, it could motivate staff responsibility and lead to holistic enhancements (Luxford et al., 2011).

5.5 Role of Interdisciplinary Coordination in Achieving Patient

Satisfaction

The research highlights an important aspect of interdisciplinary collaboration regarding the comprehensive provision of neurocritical care. Family members expressed their appreciation when different levels of personnel, such as doctors and nurses, seemed to work together and were knowledgeable. Gaps in staff responses, on the other hand, created tension. This supports the work of Thompson et al., (2018) who pointed out that trust from patients and their families in healthcare providers stems from effective interdisciplinary team collaboration supported by discernible roles, respectful interactions, and seamless communication. Inconsistencies undermining a seamless care experience can be addressed through planned interdisciplinary team

discussions as well as grouped documentation systems (Smith & Jones, 2017).

6. Recommendations

6.1 Strategies for Enhancing Communication and Patient Education

To resolve Medanta Hospital's issues with communication, the institution of comprehensive systems such as scheduled updates for families, simplified summaries, and liaison officers should be adopted. Studies have shown that these methods enhance clarity and foster trust while alleviating anxiety (Curtis et al., 2016). Furthermore, employing visual multilingual leaflets and bedside information boards can aid in patient education and informed decision-making where languages pose a barrier alongside low levels of health literacy (Williams & Carter, 2017). One, if not the most, suggested methods are family meetings that invite the family and are headed by the clinical team, which enables clinicians to relay critical clinical updates, describe treatment possibilities, and resolve queries without restriction (White et al., 2018; Curtis et al., 2016). These meetings facilitate clear communication, shared decision-making, and a therapeutic alliance between healthcare providers and families. In addition, the appointment of designated

liaison officers or patient navigators—specially trained practitioners who serve as enduring contact points for families—may strengthen the outlined elements of ongoing communication and emotional support as families obtain coherent guidance amidst the intricate frameworks of ICU care (Miller et al., 2020; Luxford et al., 2011). Offering simple clinical summaries alongside verbal communication can improve families' understanding and retention of information. Due to the nature of neurocritical illnesses and the family's time-constrained interactions during ICU visits, grasping the intricate medical terms and nuanced prognostic details from short conversations is exceedingly difficult (Greenwood et al., 2019). Multilingual written summaries that highlight essential concepts stratify crucial information into accessible language, enabling families to not only revisit the content at their own pace but also share it with other caregivers (Williams & Carter, 2017). This enhances health literacy and enables families to engage more actively and meaningfully in care participatory frameworks (Khan et al., 2019). Diagrams, flowcharts, and information boards presented at the bedside also strengthen these efforts by representing abstract or technical concepts visually and thus easier to grasp. Simple illustrations explaining aspects of neurology, ventilator settings, and the timeline of treatments can depict clarity

concerning the interventions and outcomes, fostering interactive communications (Curtis & White, 2018; Patel & Gupta, 2022). Visual aids can help to tackle cultural and language differences and support various learning methods among family members, which is crucial in a culturally rich country like India (Chaudhuri & Mukherjee, 2021). The use of multilingual handouts as well as posters can help reinforce verbally issued instructions and mitigate language proficiency related gaps (Williams & Carter, 2017). When incorporating these enhancements into Medanta Hospital's communication strategies, a number of essential prerequisites need to be addressed to ensure the desired outcomes and long-term impact. To start with, communication-focused staff workshops for the neuro-ICU unit are a prerequisite to the focus areas for training. Medical and nursing staff need to be trained not only in clinical competencies but also in empathetic listening, cultural sensitivity, and plain language voicing of care so that families receive appropriate messages (Back et al., 2018; Fleming et al., 2019). Their expertise can be enhanced through simulation-based communication training and role-playing with case scenarios which, based on prior studies, has been associated with greater confidence and competence in delivering bad news and attending to family-centered care (Davidson et al., 2012; Martinez &

Smith, 2020). Lastly, including communication processes into already existing practices will lead to the need for commitment and funding which are organizational resources. Defining roles such as the leader for family meetings and the person who gives daily updates helps settlement avoid chaos and ensures message consistency (White et al., 2018). Moreover, clinician staffing levels must support family engagement that is thorough without the need for overly rushed or superficial interactions that lead to trust erosion (Harrison et al., 2019). Adherence to best practices and promotion of accountability is encouraged when communication quality metrics are embedded in performance reviews and continuous quality improvement processes (Luxford et al., 2011). Using technology for streamlining communication is a strategy that can also be used to advance all aspects of work. Family update posts and family meeting documentation can be incorporated in EHRs using standardized formats that guarantee all team members and the messages convey consistency (Zhou et al., 2019). Family engagement and access are expanded through secure messaging and teleconferencing used for remote participation of guests that are unable to be physically present (Khan et al., 2021; Moore & Adams, 2021). Technology does not convey the empathy or personal interaction essential for trust

building and relationship nurturing, so face-to-face communication should not be sidelined (Williams & Davis, 2019). Improvement is absent without the communication evaluation and feedback loops; however, analyzing the impact communication has requires regular feedback collection. Surveys with patients and their relatives, qualitative interviews, and focus group discussions are effective methods for analyzing the emerging needs or barriers arising from a communication protocol's effectiveness (Luxford et al., 2011; Langley et al., 2009). The neuro-ICU staff are supported through this feedback loop to continuously strengthen and adjust their approaches developed to address specific evolving working challenges while continually emphasizing the aspect of patient and family-centered care.

6.2 Training Modules for ICU Staff on Empathy and Patient Interaction

Staff conduct is crucial in influencing patient and family experiences. As noted by Back et al. in 2018, it is advisable that the hospital incorporate soft skill trainings such as empathetic communication, cultural competence, and stress management into professional education seminars. Instructional simulations integrating role-play have been shown to improve emotional intelligence amongst doctors and nurses in the ICU, thereby improving the

quality of care provided interpersonally (Fleming et al., 2019). These changes, along with reducing burnout, improve staff wellbeing which, in turn, has a positive effect on patient satisfaction (Davidson et al., 2012). The development of emotional intelligence and social skills amongst nurses and physicians trained in critical care is well supported as Back et al. (2018) documented the impact of soft skill workshops on critical care staff training programs. Defined simply, empathy is the ability to understand and resonate with the feelings of someone else. Empathy is essential in patient and family centered care and its presence has been associated with enhanced patient satisfaction, fewer complaints, and improved psychological wellbeing (Fleming et al., 2019; Davidson et al., 2017). Interactive workshops enable employees to develop skills in recognizing and responding to the emotional needs of patients and families, managing difficult dialogues, and navigating cultural sensitivities (Curtis & White, 2018). These teaching undertakings give staff a skill set that enables them to address complicated clinical engagements with a great deal of compassion and professionalism, which strengthens the therapeutic alliance. Training based on simulation with role-playing exercises are among the best ways to teach emotional intelligence and communication skill to ICU personnel (Fleming et al., 2019; Back et al.,

2018). Experiential education allows healthcare providers to prepare for situations such as delivering bad news, handling family disputes, and managing emotional distress interactions that are typical in neuro-ICU environments. Through constructive role-play, personnel learn to apply verbal and non-verbal communication skills, obtain immediate feedback, reflect on their actions, and learn in a risk-free environment. Research indicates that simulation training has a positive effect on self-awareness, empathy, and confidence when dealing with sensitive interactions, resulting in enhanced interpersonal care (Miller et al., 2020; Martinez & Smith, 2020). Furthermore, such training promotes interdisciplinary collaboration and understanding, which enhances a unified and supportive care atmosphere (Thompson et al., 2018). Effective staff soft skills training enhances patient and family satisfaction as well as improves staff well-being and burnout. Workers in the ICU are perpetually stressed due to high patient loads, emotional workloads, frequent ethical conflicts, and morale challenges, creating significant psychological strain on healthcare workers (Davidson et al., 2012; Azoulay et al., 2017). Burnout damages employee health, including communication, empathy, and the overall quality of care provided, creating a negative feedback loop in a system that affects patients' health (West et al., 2018).

Providing proper training for staff on stress management, resilience, and coping tools allows hospitals to foster psychological wellness and job satisfaction (Davidson et al., 2012; Back et al., 2018). These programs enable staff to better engage with patients and families, fostering compassionate care. Supporting emotional regulation and mindful practice reduces burnout symptoms and improves overall patient satisfaction in the ICU (Yeo & Park, 2021). Cultural competence also affects patients and families from diverse backgrounds, including those in India who come from different linguistic, religious, and social spheres, to access healthcare services (Chaudhuri & Mukherjee, 2021). Culturally competent care means recognizing and respecting cultural differences alongside their health implications. This includes adapting communication strategies to fit different cultural frameworks (Desai et al., 2020). Addressing these competencies as training needs helps to prepare ICU teams to manage patients clinically as well as from a culture-based perspective, minimizing conflict and enhancing trust (Patel & Singh, 2017). This consideration is critical in neuro-ICUs, where family members may hold diverse notions about prognosis, participation, and end-of-life care necessitating nuanced empathetic answers and prompt compassionate engagement (Srinivasan & Prabhu, 2018). Systemic support is

crucial for the effectiveness and sustainability of soft-skills training initiatives. Leadership must provide protected time for training and evaluate the integration of skilled trainers and evaluators into professional development (Luxford et al., 2011; Miller et al., 2020). By fostering a culture that enhances staff well-being and values empathy and communication, active participation is enhanced, enabling the transference of learned skills into actual clinical practice (Davidson et al., 2017). Moreover, incorporating performance evaluations related to care documented by patients and families with staff regarding their communication and caring behaviors integrates accountability for refining care quality into continuous improvement frameworks (Curtis et al., 2016). Finally, a multidisciplinary model focuses on soft-skills training involving all members of the neuro-ICU team: physicians, nurses, physiotherapists, social workers, and other relevant specialists, fostering applicable communication skills and basic interpersonal competencies (Thompson et al., 2018). This cohesion aids the delivery of consistent messaging to families and enhances team collaboration, resulting in a positive care environment that supports patients, families, and staff (Smith & Jones, 2017). With enhanced education on soft skills, neuro intensive care

units can improve the technical aspects and the humanistic components vital to patient- and family-centered healthcare.

6.3 Structural Improvements Based on Feedback

Some participants in the study offered suggestions for enhancing the clinic's physical areas such as making patients' and relatives' seating more comfortable and private, as well as reducing noise levels. Research demonstrates patient and family friendly environments are essential to emotional comfort and perceived care quality (Ulrich et al., 2008). Medanta Hospital might incorporate quiet zones, ergonomic seating, and softened illumination in both ICU waiting rooms and family lounges. Other, non-pharmacologic measures such as soundproofing, staff education, and nurse-counselor awareness programs designed to lower noise levels during quiet times will enhance restful and restorative states (Douglas et al., 2018). Many family members spend long periods of time, in some cases days, near the ICU waiting for updates on their loved ones. This study highlights the insufficient provision of privacy and comfortable seating in waiting areas contributing to relatives' discomfort. The lack of adequate space, overcrowding, absence of ergonomic seating contribute not just to physical fatigue, but also heightens

anxiety and negatively impacts the overall care experience (Greenwood et al., 2019; Singh & Verma, 2019). Research indicates that well-designed and furnished waiting areas can significantly ease this burden by serving as a sanctuary where families can rest, gather strength, and meaningfully engage with the medical team (Ulrich et al., 2008). Family satisfaction has also been noted to improve when privacy, reclining seats, and other refreshments are made available (Davidson et al., 2017; MacDonald & Bateman, 2020).

Enhancing privacy is noted as a critical environmental concern in the study by several respondents. Privacy is a basic human right which upholds dignity and a sense of control for vulnerable patients during critical illness surveillance moments (Ulrich et al., 2008). Family members actively participate in protected discussions with care providers and amongst themselves involving emotionally charged topics such as the prognosis, treatment options, and their feelings about the entire situation. Having private rooms or sufficiently partitioned spaces within the ICU and family lounge enables these discussions and helps minimize discomfort while maximizing supportive communications (Douglas & Dawson, 2018; Desai et al., 2020). In neuro-ICUs, where complex care planning and end-of-life decisions are common, maintaining confidentiality and privacy is both critical from an ethical

standpoint and vital emotionally (Bosslet et al., 2015). As for Medanta's hospitals, privacy balancing issues, along with spatial and resource constraints, require innovative design solutions such as movable screens, soundproof booths, and even family consultation areas (Singh & Verma, 2019). Noise control especially emerged as a critical environmental consideration for both patient recovery as well as family satisfaction. The intensive care unit (ICU) contains an amalgamation of incessant noise such as the buzzing of alarms, medical equipment, staff conversations, as well as foot traffic in the hallways which increases sound levels and hinders patient rest and heightens psychological distress (Leone & Gagné, 2023; Zinat & Kaleem, 2018). Critically ill patients have also been shown to experience excessive noise which has resulted in sleep disturbances, delirium, and an increase in stress hormones, all of which is problematic for neurological recovery (Ulrich et al., 2008; Piers et al., 2019). These families exposed to relentless noise complain of difficulty focusing when receiving updates which eventually leads to overwhelm and a reduced sense of calm which prevents them from participating meaningfully in care (Davidson et al., 2017). Therefore, it is evident why noise management is necessary in the ICU. Effective strategies to manage noise are modifications of physical spaces as

well as changes to behavior patterns. Examples of soundproofing materials are acoustic panels and double-glazed windows which reduce ambient noise from nearby areas and outside (Douglas & Dawson, 2018). Moreover, the creation of designated quiet areas that allow patient rest improves the environment for family members to be present and to communicate (Walker & Casey, 2020). Quieter workplace habits and noise pollution have been addressed through staff education programs, which alongside other measures have reduced human activity noise (Leone & Gagné, 2023; Miller et al., 2020). Reduction of excessive or non-vital alarms increases noise levels without endangering patient safety, thus the overall exposure to noise can be minimized (Ulrich et al., 2008). The blend of environmental design with staff involvement nurtures a culture that respects the healing environment for patients and families. In the ICU, ambient light is also an environmental factor that impacts mood as well as circadian rhythms. ICU patients benefit from exposure to natural light and adjustable artificial lighting as it enhances sleep, reduces the incidence of delirium, and improves psychological comfort (Ulrich et al., 2008; Zolnieriek & DiMatteo, 2020). For families, appropriate lighting in waiting areas and consultation rooms helps to foster a welcoming atmosphere and mitigate stress (Davidson et al., 2017). In both clinical and

family areas, Medanta Hospital could integrate ambient light technologies to improve the soothing nature of these spaces, thus reinforcing the overall objectives of patient- and family-centered care. The relationship between the quality of the environment and other aspects of care is striking. An orderly, calm, quiet, and comfortable setting allows families to be physically present and emotionally available, therefore enhancing the supportive communication and empathy processes during interactions (Curtis & White, 2018). On the other hand, inadequate environmental conditions can worsen physical fatigue, heighten irritability, and amplify anxiety, effective family engagement, and satisfaction (Greenwood et al., 2019). Improvements to the environment serve as enablers of holistic care, highlighting their inclusion in initiatives to improve quality alongside clinical and communication refinements (Luxford et al., 2011). In Indian tertiary care hospitals, limited resources and a high volume of patients present challenges to environmental changes. Nevertheless, evidence indicates that many such changes are achievable through high-impact, low-cost strategies, such as optimizing space, adding plants for aesthetic appeal, and regular maintenance for cleanliness (Singh & Verma, 2019; Desai et al., 2020). Involving patients and their families in participatory design processes can guarantee that

modifications are made in ways that satisfy their priorities and cultural expectations (MacDonald & Bateman, 2020).

6. Conclusion

The primary objective of this research was to evaluate both patient and family satisfaction within the neuro-ICU at Medanta Hospital using a qualitative cross-sectional analysis of the feedback data available. A total of 129 responses were sampled, and from these, key factors influencing satisfaction were extracted through thematic analysis. The results uncovered five primary themes including effectiveness of communication, emotional support and staff empathy, clinical care quality, facility ambiance, and teamwork which in combination contributed significantly to the experience of care. The findings reinforce the emerging evidence in healthcare literature that patient satisfaction is not simply an outcome stemming from clinical success but, rather, a vital benchmark of care, especially in critical healthcare environments such as neuro-ICUs. The literature underscores the importance of empathic engagement, effective communication, and coordinated care among healthcare professionals as

fundamental to trust, comfort, and perceived competence (Curtis & White, 2018; Davidson et al., 2017). These observations are critical in neurocritical care, where family members play a crucial role during encounters where the patient is unable to voice his or her needs. This study adds to the sparse literature on patient satisfaction in an Indian private hospital ICU with the aim to provide a model for other high-acuity units to undertake similar studies. With the aid of feedback, hospitals are enabled to devise service delivery interventions that enhance an institution's reputation. The methodology discussed in this paper and its insights can help shape policies and quality assurance frameworks in tertiary care hospitals not only in India but in the whole world.

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