

Accreditation through Leadership and Engagement: A Delphi-validated Model for Multispecialty Hospitals in Delhi NCR

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Abstract

A multifaceted approach is essential to ensure and sustain high-quality patient care in today's complex healthcare environment. While quality accreditation serves as a critical benchmark for standardizing care and promoting continuous improvement, accreditation alone does not guarantee sustained quality outcomes. The long-term effectiveness of accreditation depends significantly on the engagement and commitment of the healthcare workforce, supported by leadership that aligns organizational goals with evidence-based practices. Knowledge-Oriented Leadership (KOL) has emerged as a strategic enabler that emphasizes knowledge creation, sharing, and application, thereby fostering learning environments, accountability, and informed decision-making within hospitals. Unlike transformational leadership, which primarily focuses on motivation and vision, or distributed leadership, which emphasizes shared responsibility without structured knowledge governance, KOL uniquely integrates leadership behavior with systematic knowledge management, making it particularly relevant for sustaining accreditation standards. Against this backdrop, the present study examined the interrelationships among quality accreditation, healthcare workforce engagement, and leadership as a moderating factor in multispecialty hospitals in the Delhi NCR region. A Digital Delphi methodology was employed to ensure methodological rigor and contextual relevance through structured, iterative feedback from a panel of healthcare professionals, accreditation experts, and academics. The Delphi process led to the refinement of an initial 20-item tool into a validated 44-item instrument designed to capture the complex dynamics between leadership practices, workforce engagement, and accreditation sustainability. The findings underscore the pivotal role of leadership-driven engagement strategies in maintaining accreditation compliance and enhancing organizational performance.

Keywords: Delphi Process, Healthcare Workforce Engagement, Leadership, Quality Accreditation

Introduction

The healthcare sector is undergoing a paradigm shift, with a growing emphasis on quality accreditation to ensure smooth healthcare delivery (1-3). Quality accreditation is a mark of excellence and achieving it requires a strong foundation (4).

Rapid social, economic, and technological advancements in India have raised concerns about the quality of healthcare services. Hospitals play a critical role in the healthcare system, and accreditation is recognized as the most effective strategy for improving hospital standards. This complex landscape has necessitated significant shifts in organizational management, particularly within hospitals, demanding a responsive approach (5). Despite considerable attention and efforts devoted to patient safety across various healthcare sectors, there is still progress to be

made globally in terms of quality outcomes (6). By understanding healthcare professionals' perceptions and experiences, this study seeks to analyse the collective thoughts and opinions to navigate organizational transformation (7).

Accreditation, as defined by the National Accreditation Board for Hospitals (NABH), is a significant form of public recognition for healthcare organizations that meet specific quality standards (8). Accredited hospitals demonstrate compliance with rigorous international benchmarks, signifying their commitment to providing superior patient care. To support sustained involvement and future success, organizational leaders must understand the motivations for employees' engagement in quality improvement (9). Although accreditation has the potential to enhance quality and safety, successful

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implementation varies across nations. This requires careful consideration and adaptation to the specific legal, regulatory, and institutional frameworks of each country (10).

To address these concerns, this study aims to develop and validate a comprehensive model that elucidates the nuanced relationships between these key elements. By employing a rigorous Delphi method, this study seeks to, Investigate the direct and indirect influence of workforce engagement on quality accreditation outcomes, Identify key moderating factors that may amplify or attenuate the relationship between workforce engagement and accreditation, Develop a robust and empirically supported consensus based validated questionnaire on healthcare workforce engagement and its dimensions relating to quality accreditation outcomes ensuring sustainability in hospital settings using digital

Delphi technique can guide healthcare organizations in optimizing workforce engagement strategies to enhance quality outcomes. This technique involves multiple rounds of questionnaires or surveys to collect feedback and refine opinions, ultimately leading to a consensus among participants (10, 11). Some of the key features of this technique are Expert Panel where a carefully selected group of subject matter experts participate in the process ensuring that the insights and decisions are informed by high levels of expertise, Anonymity where Participants

remain anonymous to each other, reducing the influence of dominant individuals and encouraging unbiased input, Iterative Process which involves multiple rounds of surveys and after each round, the responses are analysed and summarized, and the findings are shared with the panel to refine their opinions in subsequent rounds, Feedback and Refinement, where experts receive aggregated feedback from previous rounds, allowing them to adjust their views or provide additional insights. This iterative feedback loop fosters convergence of opinions, Consensus Building, and the process continues until a consensus or a stable range of opinions is achieved on the issue under study (12). The electronic Delphi technique is an electronic adaptation of the traditional Delphi technique, leveraging digital tools and online platforms to facilitate the process of gathering and synthesizing expert opinions. Similar to the traditional Delphi method, the electronic Delphi technique is iterative and aims to build consensus among a group of experts. However, it uses technology, such as Digital Tools, including surveys and questionnaires, which are distributed electronically, typically through email, online survey tools, or specialized platforms designed for Delphi studies, to overcome challenges associated with physical meetings, such as geographical barriers, time constraints, and logistical complexities.

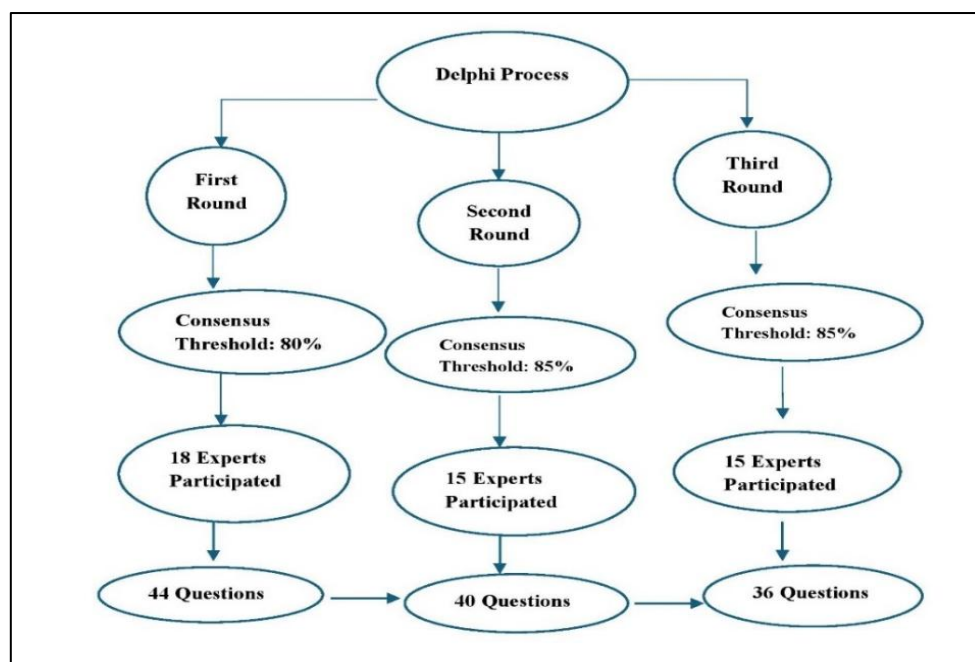


Figure 1: Visual Synthesis of Delphi Findings and Leadership Pathways

Methodology

Study Design

This study employed a mixed-method approach, combining quantitative and qualitative data collection through a Delphi study. The Delphi method is a structured iterative process involving a panel of experts to achieve consensus on specific topics.

Study Setting

The study will be conducted in multispecialty hospitals located in the Delhi NCR region of India, which includes Delhi and its neighbouring cities and is characterized by a high concentration of healthcare institutions. The methodological framework of the study is illustrated in Figure 1,

which depicts the three-round Delphi process adopted for instrument development and expert consensus. The conceptual pathways linking Knowledge-Oriented Leadership with healthcare workforce engagement and quality accreditation outcomes are presented in Figure 2, providing the theoretical basis for the study framework. In the first Delphi round, 18 experts participated and reviewed 44 questionnaire items. Based on expert feedback, the instrument was refined for the second round, in which 15 experts evaluated 40 items. The same panel of 15 experts participated in the third round and assessed the final 36 items, resulting in a consensus-driven and validated measurement tool.

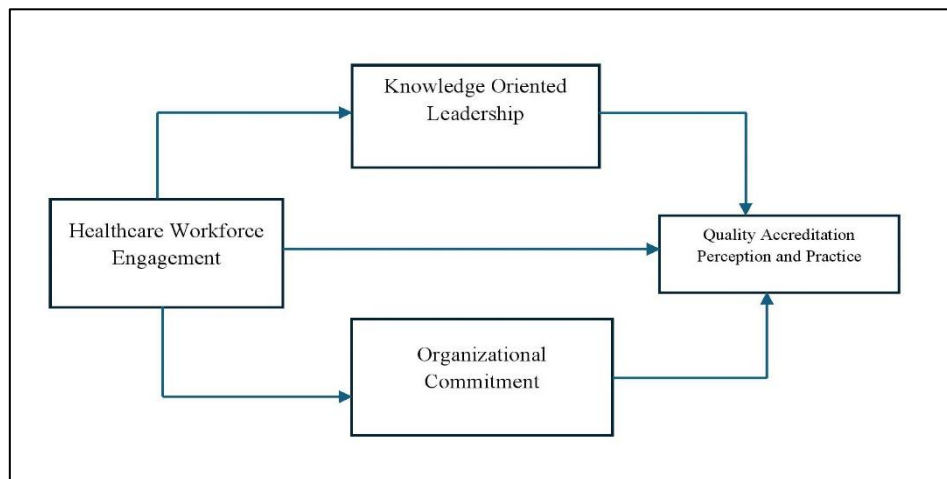


Figure 2: Pathways linking Knowledge-oriented Leadership to Workforce Engagement and Accreditation Outcomes

Conceptual Framework

Conceptual pathways linking Knowledge-Oriented Leadership with healthcare workforce engagement and quality accreditation outcomes are shown in Figure 2. Figure 2 outlines how leadership-driven knowledge creation, sharing, and application influence employee motivation, commitment, and compliance with accreditation standards. These pathways demonstrate the

central role of leadership-mediated engagement mechanisms in sustaining accreditation performance in multispecialty hospitals.

Table 1 demonstrates how each item was systematically allocated to measure the dimensions of Knowledge-Oriented Leadership, healthcare workforce engagement, organizational commitment and quality accreditation outcome.

Table 1: Distribution Of the Final 36 Study Questions Included in The Study

Dimension	Sub-Dimension	Item No.	Questionnaire Item	Scale
Healthcare Workforce Engagement (HWE)	Mission Alignment	1	I understand how my work contributes to the hospital's goal of attaining and sustaining quality accreditation.	1 to 7
Healthcare Workforce Engagement (HWE)	Understanding of Accreditation Goals	2	Employees understand the purpose and requirements of quality accreditation.	1 to 7
Healthcare Workforce Engagement (HWE)	Resource Availability	3	I have the resources and tools needed to effectively support the hospital's quality accreditation processes.	1 to 7

Healthcare Workforce Engagement (HWE)	Recognition for Efforts	4	In the past months, I have received recognition or appreciation for my contributions to quality accreditation.	1 to 7
Healthcare Workforce Engagement (HWE)	Motivation and Recognition	5	Accreditation efforts are recognized and rewarded.	1 to 7
Healthcare Workforce Engagement (HWE)	Colleague Commitment	6	My colleagues are equally committed to achieving and maintaining the hospital's accreditation standards.	1 to 7
Healthcare Workforce Engagement (HWE)	Role Clarity	7	I clearly understand my responsibilities in the hospital's quality accreditation process.	1 to 7
Healthcare Workforce Engagement (HWE) and Knowledge Oriented Leadership (KOL)	Opportunities for Development	8	The hospital provides opportunities for me to enhance my skills and knowledge to contribute to quality accreditation.	1 to 7
Healthcare Workforce Engagement (HWE)	Participation in Accreditation Processes	9	Involvement in audits, process improvement, and compliance activities.	1 to 7
Healthcare Workforce Engagement (HWE)	Commitment to Quality	10	Alignment of personal goals with organizational quality objectives.	1 to 7
Healthcare Workforce Engagement (HWE) and Knowledge Oriented Leadership (KOL)	Constructive Feedback	11	In the past six months, I have received constructive feedback regarding my role in achieving and sustaining quality accreditation.	1 to 7
Healthcare Workforce Engagement (HWE) and Knowledge Oriented Leadership (KOL)	Team Collaboration	12	My team works collaboratively and effectively toward the hospital's accreditation goals.	1 to 7
Healthcare Workforce Engagement (HWE) and Knowledge Oriented Leadership (KOL)	Leadership Support	13	My manager or supervisor actively supports my efforts to contribute to the hospital accreditation process.	1 to 7
Healthcare Workforce Engagement (HWE)	Pride in the Hospital	14	I feel proud to work for a hospital committed to achieving and sustaining quality accreditation.	1 to 7
Healthcare Workforce Engagement (HWE)	Perceived Support	15	Availability of resources, training, and leadership support for accreditation.	1 to 7
Healthcare Workforce Engagement (HWE)	Impact on Patient Care	16	I believe that achieving and maintaining quality accreditation positively impacts patient care and safety.	1 to 7
Healthcare Workforce Engagement (HWE)	Sustainability Confidence	17	I am confident that the hospital's efforts toward quality accreditation can be sustained over the long term.	1 to 7
Organizational Commitment (OC)	Affective Commitment	18	I am emotionally attached to this organization.	1 to 7
Organizational Commitment (OC)	Affective Commitment	19	I feel a strong sense of loyalty to this organization.	1 to 7
Organizational Commitment (OC)	Affective Commitment	20	I am proud to work for this organization.	1 to 7
Organizational Commitment (OC)	Affective Commitment	21	I would be very happy to spend the rest of my career at this organization.	1 to 7
Organizational Commitment (OC)	Affective Commitment	22	I feel a deep sense of belonging to this organization.	1 to 7
Organizational Commitment (OC)	Continuance Commitment	23	It would be very difficult for me to leave this organization right now.	1 to 7

Organizational Commitment (OC)	Continuance Commitment	24	I feel that I have invested too much in this organization to leave now.	1 to 7
Organizational Commitment (OC)	Continuance Commitment	25	Leaving this organization would have a significant negative impact on my life.	1 to 7
Organizational Commitment (OC)	Continuance Commitment	26	I feel that I have no other viable employment options.	1 to 7
Organizational Commitment (OC)	Continuance Commitment	27	I am aware of the costs associated with leaving this organization.	1 to 7
Organizational Commitment (OC)	Normative Commitment	28	I feel a moral obligation to stay with this organization.	1 to 7
Organizational Commitment (OC)	Normative Commitment	29	I believe that I should stay with this organization out of a sense of loyalty.	1 to 7
Organizational Commitment (OC)	Normative Commitment	30	I feel a sense of duty to remain with this organization.	1 to 7
Organizational Commitment (OC)	Normative Commitment	31	I would feel guilty if I left this organization.	1 to 7
Organizational Commitment (OC)	Normative Commitment	32	I believe that I should repay the organization for the opportunities it has provided me.	1 to 7
Quality Accreditation Perception and Practice (HQA)	Staff Competence in Quality Improvement	33	Hospital workforces are trained and skilled in executing and sustaining continuous quality improvement initiatives?	1 to 7
Quality Accreditation Perception and Practice (HQA)	Balancing Organizational Goals with Accreditation	34	Organization aligns its internal objectives with the evaluation and attainment of accreditation requirements.	1 to 7
Quality Accreditation Perception and Practice (HQA)	Interdepartmental Communication and Coordination	35	Effective collaboration and communication between departments occurred during the accreditation process.	1 to 7
Quality Accreditation Perception and Practice (HQA)	Availability of Training and Technical Support	36	Training programs and consultation services are provided for accreditation implementation.	1 to 7

Table 2: Summary of Delphi Outcomes

Round	Objective	Process	Consensus Threshold	Key Findings	Outcome
First Round	Initial item evaluation and identification of key themes	44-item questionnaire sent via Google Form; experts reviewed for relevance	80%	15/18 experts agreed on the importance of teamwork, motivation, job satisfaction; themes identified: leadership style, organizational commitment, external influences	All 44 items retained with minor revisions
Second Round	Validation of revised questionnaire items using Likert scale	Experts rated items on a 7-point Likert scale (1-7); items with scores of 6 or 7 were considered acceptable	85%	85% consensus reached on most items; strong support for content breadth and clarity	All items retained; minor edits made for clarity
Third Round	Final consensus and refinement of the tool	Experts reviewed revised questionnaire; focus on final structure and content	85%	Final expert agreement reached; redundant and unclear items identified	8 items removed; final 36-item questionnaire finalized

Table 2 depicts the summary of the Delphi process that highlights the level of expert consensus arrived at the end of each round. In the first round 44 items were retained with minor language

corrections. In the second round, again all the 44 items were retained with minor editing in the content. In the final round (third round), 8 items which has redundancy and unclear in nature were

removed and at the end 36 item questionnaire was finalized.

Participant Recruitment

A panel of experts will be recruited through purposive sampling methods. The inclusion criteria are as follows:

Healthcare Professionals

Physicians, nurses, allied health professionals, and hospital administrators with at least 5 years of experience in multi-specialty hospitals within the Delhi NCR region.

Quality Accreditation Experts

Individuals with expertise in quality accreditation standards (e.g., NABH, JCI) and their implementation in healthcare settings.

Academicians

Researchers and faculty members with expertise in healthcare management, organizational behaviour, and quality improvement.

Data Collection Statistical Rigor and Analysis

The Delphi technique employed in this study followed the established methodological standards to ensure statistical rigor, transparency, and reproducibility. Panel adequacy and credibility were ensured by recruiting a purposive sample of subject matter experts with demonstrated expertise in the relevant domain. The Delphi panel comprised 18 experts in the first round and 15 in the second and third rounds, exceeding the recommended minimum of 10–18 experts for homogeneous Delphi panels. Expert eligibility criteria included a minimum of 5 years of professional experience, leadership or managerial roles, prior research or publication experience, and direct exposure to quality accreditation processes, such as NABH. Attrition across rounds was systematically monitored, with an overall dropout rate of 20–30 %, which remained within acceptable limits for Delphi studies.

Given the ordinal nature of the Delphi data, statistical analysis was conducted using non-parametric descriptive measures. For each Delphi item, median scores were calculated as measures of central tendency, and interquartile ranges (IQR) were used to assess response dispersion. The use of the median and IQR is consistent with the best practices for analysing Likert-scale data and provides robustness against the influence of outliers.

Consensus criteria were predefined a priori to strengthen the methodological rigor. An item was considered to have achieved consensus if it met all three conditions:

- a) $\geq 75\%$ agreement among panelists,
- b) A median score ≥ 4 on a 5-point Likert scale, and
- c) Interquartile range (IQR) ≤ 1 .

Items that failed to meet these thresholds were revised or excluded in subsequent rounds.

To assess the stability of expert responses across the rounds, median ratings from successive Delphi rounds were compared.

In addition, the percentage agreement was calculated, with items achieving $\geq 75\%$ ratings of “agree” or “strongly agree” retained in the final framework.

For domains comprising multiple related items, internal consistency reliability was assessed using Cronbach’s alpha, with values exceeding the acceptable threshold of 0.70, indicating good internal consistency of the Delphi questionnaire.

Transparency in decision-making was ensured by explicitly reporting the number of items retained, modified, or excluded after each Delphi round, along with the corresponding rationale (e.g., low agreement levels or high IQR values). Sensitivity analysis using a stricter consensus threshold of 80% agreement yielded comparable results, further confirming the robustness of the findings.

First Round

During the first phase of the study, experts were recruited. A structured questionnaire was shared with them through Google Forms to collect data. The initial draft of the questionnaire had a total of 44 closed-ended questions to assess healthcare workforce engagement, quality accreditation, and potential moderating factors (e.g., leadership support, organizational commitment, and technology adoption). The questionnaire items were formulated in English and shared with each Delphi participant through email. The questionnaire was evaluated by experts, and feedback was obtained on the inclusion or exclusion of questions based on their relevance to the study.

After 6 weeks of rigorous data collection and follow-up with the expert panel, the agreement rate was substantially calculated for each question along with the proportion of experts in the study.

Only after gaining 80% of the panellist approval, the questions were included in the next round

Second Round

Feedback from Second round was analysed, and the questionnaire was revised based on expert feedback. The revised questionnaire was redistributed to the panel for a second round of feedback. The entire process took 4 weeks, and panelists were asked to rate each question on a 7-point Likert Scale, where score 1 indicated Strongly Disagree and score 7 indicated strongly agree. Response rates of 6 and 7 were recommended for inclusion. The predetermined threshold for agreement was set at 85%

Third Round

The final questionnaire was developed based on the feedback from the first and second rounds. Consensus was defined as 85% of the experts agreeing on the final inclusion of the questionnaire. The consensus for third round too about 4 weeks for collection and further analysis

The consensus among the experts along with the feedback has given the content a strong validation to be taken as a questionnaire tool

Expert feedback from each round will be analysed using thematic analysis to identify key themes, patterns, and areas of consensus, and statistical analysis will be conducted to assess the level of agreement among experts on key constructs and relationships.

Results

The outcome of the study indicates that a significant expert panel in majority – 15 out of 18, recognized the factors such as motivation, job satisfaction, and collaboration within teams will enhance quality outcomes and the consensus threshold was obtained at 80% as shown in Table 2 which summarizes the outcomes of the Delphi process, highlighting the level of expert consensus achieved across successive rounds. These outcomes demonstrate the methodological rigor and content validity underpinning the final questionnaire.

In the first round, thematic analysis was performed for questions to be included in the survey assessing the perceptions and impacts of accreditation processes on healthcare delivery (12). The themes included elements such as leadership style, organizational commitment, and external

pressures affecting workforce engagement and accreditation outcomes.

In the next round the above-mentioned themes were applied and about 85% of the consensus threshold was obtained where the experts agreed upon the comprehensiveness of the questionnaire

In third round the panel evaluated the draft of questionnaire and again 85% of consensus threshold was obtained stating the acceptance of the questionnaire, leading to exclusion of 8 questions from the initial pool of 44 Questions

During iterative rounds, the experts achieved a consensus on various critical aspects of leadership, Commitment and employee's engagement

The final version of the newly developed questionnaire, based on the Delphi survey, as depicted in Table 1 which presents the distribution of the final 36 study questions used in the analysis, categorized across key study constructs. It demonstrates how items were systematically allocated to measure Knowledge-Oriented Leadership, healthcare workforce engagement, and quality accreditation outcomes. This distribution ensures comprehensive coverage of the conceptual framework and supports the content validity of the instrument. related to workforce engagement quality accreditation, organizational commitment, and knowledge-oriented leadership on a 7-point Likert Scale (13-17).

First Round: Establishing Foundational Agreement

In the initial round, the preliminary 44-item questionnaire was distributed to an expert panel consisting of 18 participants, including healthcare administrators, quality accreditation professionals, academicians, and clinical leaders. Of these, 15 experts (83.3%) agreed that teamwork, motivation, and job satisfaction are vital components contributing to improved healthcare quality. This met the predefined consensus threshold of 80%, affirming that the initial items were well aligned with the study's objectives.

A thematic analysis of the qualitative feedback collected during the first round revealed several key themes:

- a) Leadership styles (particularly transformational and knowledge-oriented leadership)
- b) Organizational commitment

c) External influences, including regulatory pressures, accreditation guidelines, and technological infrastructure

These themes were instrumental in refining the questionnaire for subsequent phases. Based on both quantitative agreement and thematic insights, questions that lacked clarity or relevance were revised, and certain redundant items were earmarked for elimination in later rounds.

Second Round: Refinement and Validation of Content

The revised questionnaire was redistributed to the panel for the second round, this time using a 7-point Likert scale (1 = Strongly Disagree, 7 = Strongly Agree) to assess the perceived importance and relevance of each item. The threshold for consensus was raised to 85% to ensure greater stringency in the content validation.

The results of the second round were highly encouraging.

Over 85% of the experts rated most items with scores of 6 or 7, indicating strong agreement with the refined content.

Experts affirmed that the questionnaire comprehensively captured the multifaceted dimensions of healthcare workforce engagement and its link to successful accreditation.

Additional suggestions were incorporated to enhance the clarity and structure, further improving the coherence of the tool. No major concerns regarding item redundancy or misalignment were noted, indicating high levels of content validity at this stage.

Third Round: Finalization and Consensus

The third round focused on consolidating expert feedback to finalize the instrument. After careful review and consideration of minor revisions, eight items were removed from the original pool of 44, resulting in a final 36-item questionnaire. This final version retained only the most relevant, non-redundant, and consensus-approved questions, reflecting a high level of rigor and methodological precision, and highlighting the following themes:

HWE: Healthcare Workforce Engagement

KOL: Knowledge-Oriented Leadership

OC: Organizational Commitment

HQA: Quality Accreditation Perception and Practice

Each item was rated on a 7-point Likert scale, allowing for a nuanced evaluation of respondents' perceptions across a continuum of agreement. This structure enhances the tool's sensitivity and ability to detect subtle differences in workforce engagement and accreditation experiences across settings.

The Delphi methodology employed in this study was instrumental in developing a valid, reliable, context-sensitive tool. The consistent agreement across the three rounds reflected deep alignment among the experts regarding the essential constructs driving workforce engagement and accreditation outcomes. The finalized 36-item questionnaire is now positioned to serve as a strategic instrument for researchers and healthcare leaders seeking to measure, analyze, and enhance workforce engagement in the pursuit of accreditation and quality excellence.

Discussion

The application of the Delphi technique in this study enabled the systematic development and validation of a comprehensive 36-item instrument grounded in expert consensus (18–22). Beyond methodological rigor, the findings contribute to broader theoretical debates in quality management and sustainability transitions within healthcare systems.

From a quality management perspective, traditional models such as Total Quality Management (TQM) and continuous quality improvement emphasize process standardization and compliance mechanisms. However, the present findings suggest that workforce engagement and leadership commitment function not merely as supportive elements but as central drivers of accreditation sustainability (22–25). This extends prevailing theoretical assumptions by positioning human capital variables as structural determinants rather than peripheral contributors. Furthermore, within the framework of sustainability transitions theory, organizational change is understood as a multi-level process shaped by leadership vision, cultural alignment, and institutional reinforcement. The validated questionnaire operationalizes these abstract constructs into measurable dimensions, thereby refining theoretical discourse by linking macro-level sustainability principles with micro-level workforce dynamics. The findings therefore

challenge compliance-oriented interpretations of accreditation and instead support a relational and engagement-based model of sustained quality improvement.

By integrating leadership, organizational commitment, and workforce engagement constructs into a single validated tool, the study advances theory by demonstrating that sustainable accreditation outcomes are contingent upon socio-organizational alignment rather than procedural adherence alone.

Implications of the Study

Strengthened Validation Through Expert Consensus

Consensus thresholds of 80% in the first round and 85% in the second and third rounds highlighted the robust agreement among the expert panel.

Iterative feedback ensured that the questionnaire items were relevant and aligned with the study's objectives, offering strong content validity.

Critical Factors Identified

The experts consistently emphasized the importance of motivation, job satisfaction, and collaboration within teams as key contributors to high-quality outcomes.

Leadership, organizational commitment, and technology adoption were identified as significant moderating factors influencing workforce engagement and accreditation outcomes.

Iterative Refinement of Questionnaire

The elimination of eight questions during the Delphi process demonstrates the effectiveness of expert feedback in narrowing the questionnaire to a precise and focused tool.

The final 36-item questionnaire represents a well-rounded instrument that captures the key dimensions of workforce engagement, quality accreditation, and the interplay of organizational factors.

Thematic Analysis and Statistical Rigor

The thematic analysis in the first round helped distil broad expert inputs into clear themes such as leadership style, organizational commitment, and external pressures.

Statistical validation through response rates (scores of 6 and 7 on a 7-point Likert scale) ensured that only highly relevant questions were retained.

Conclusion

The rigorous Delphi process culminated in the development of a validated 36-item questionnaire specifically designed to capture the complex and multidimensional relationships between workforce engagement, leadership, and quality accreditation in healthcare organizations. Through structured expert consensus across multiple iterative rounds, the instrument demonstrates strong content validity and contextual relevance to multispecialty hospital environments.

This questionnaire serves as both a diagnostic and strategic framework, enabling healthcare organizations to systematically evaluate determinants of workforce motivation, leadership effectiveness, and accreditation sustainability. Its application provides administrators with actionable insights for strengthening organizational culture, optimizing engagement strategies, and enhancing long-term quality outcomes.

In addition to its immediate managerial utility, the instrument establishes a robust foundation for longitudinal and comparative research, facilitating deeper exploration of the mechanisms that sustain healthcare quality. By translating complex organizational dynamics into measurable constructs, the study contributes meaningfully to the advancement of sustainable quality practices in healthcare systems.

Limitations of the Study

The study is context-specific to multi-specialty hospitals in the Delhi NCR region, which may limit the generalizability of the findings to other healthcare settings or regions of India.

Future Research Directions

Broader application of the questionnaire in diverse healthcare settings to test its adaptability and relevance is recommended. Longitudinal studies are needed to evaluate the impact of workforce engagement strategies on sustained quality outcomes. Exploration of additional moderating factors, such as cultural influences and regulatory changes, on accreditation outcomes is recommended.

Abbreviations

HQA: Quality Accreditation Perception and Practice, HWE: Healthcare Workforce Engagement, KOL: Knowledge-Oriented Leadership, OC: Organizational Commitment

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Author Contributions

Bhoomadevi A: conceptualization, methodology, writing—original draft preparation, reviewing, visualization, supervision, supervision, Archana Koul: conceptualization, methodology, writing—original draft preparation, reviewing, visualization, supervision, reviewing, editing the manuscript, validation, Praveen Kumar P: reviewing, editing the manuscript, validation. All authors have read and agreed to the published version of the manuscript.

Conflict of interest

The authors declare no conflicts of interest.

Data Availability

The data supporting the findings of this study are available from the corresponding author upon reasonable request.

Declaration of Artificial Intelligence (AI) Assistance and AI assisted technologies in the writing process

The authors declare that no artificial intelligence (AI) was used for the writing of the manuscript.

Ethics Approval

Not applicable.

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