

Abstract

The quality of healthcare services is a pivotal determinant of patient satisfaction, institutional reputation, and overall public health outcomes. This thesis offers a multidisciplinary investigation into the service quality dynamics of the healthcare sector, with a specific focus on Kolkata, India. The study begins by establishing the contextual relevance of healthcare service quality within the broader spectrum of sustainable healthcare delivery. It explores the foundational concepts of service characteristics, consumer expectations, and service quality models, such as SERVQUAL and SERVPERF, emphasizing their applicability in healthcare environments.

To deepen the understanding of research trends, a bibliometric review is conducted, mapping global and regional contributions in areas including healthcare service quality, Multi-Criteria Decision-Making (MCDM) applications, Quality Function Deployment (QFD), and Failure Mode and Effects Analysis (FMEA). The bibliometric findings reveal a marked increase in healthcare quality-related publications with India, the United States, and China emerging as significant contributors.

A detailed systematic review complements this analysis by synthesizing studies that apply MCDM, QFD, and FMEA methodologies to assess and enhance healthcare services. These include fuzzy logic-integrated decision models, stakeholder-centric QFD frameworks, and advanced risk prioritization tools that address the multifaceted nature of healthcare risks. The study identifies critical service quality dimensions such as tangibility, responsiveness, reliability, assurance, empathy, infrastructure adequacy, patient engagement, and digital service interfaces.

The research further highlights the growing need for integrated, technology-enabled, and patient-centred decision-making frameworks in Indian healthcare. It underscores the limitations of traditional linear models and advocates for hybrid methodologies combining quantitative rigor with qualitative insight. The findings offer valuable implications for healthcare administrators, policymakers, and quality analysts seeking to implement robust service evaluation mechanisms and enhance healthcare performance at institutional and systemic levels.