



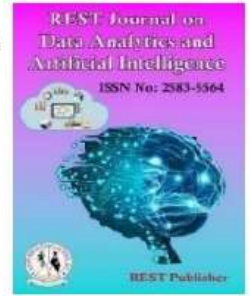
REST Journal on Data Analytics and Artificial Intelligence

Vol: 4(1), March 2025

REST Publisher; ISSN: 2583-5564

Website: <http://restpublisher.com/journals/jdaai/>

DOI: <https://doi.org/10.46632/jdaai/4/1/38>



Optimizing Healthcare Delivery: A Systematic Evaluation of Nursing Care Approaches Through TOPSIS Methodology

Sharish Khan

Syed Mantaqi Memorial College of Nursing and Medical technology, IUST, Awantipora. Jammu and Kashmi, India.

*Corresponding Author Email: khanshr51@gmail.com

Abstract: This study investigates the effectiveness of different nursing care approaches using a technique for priority ordering by analogy with the Top of Ideal Solution (TOPSIS) approach. The study employed a systematic analytical framework incorporating normalized data matrices and weighted decision criteria to assess the relative performance of each nursing care approach. The TOPSIS analysis revealed that Comprehensive nursing care achieved the highest ranking with a closeness coefficient of 0.8126, followed closely by Provision of nursing care (0.8095). The findings demonstrate that holistic approaches to patient care, which balance multiple aspects of healthcare delivery, yield superior results compared to more narrowly focused methods. The study utilized equal weight distribution (0.25) across all criteria to ensure unbiased evaluation, while the distance metrics from ideal and negative-ideal solutions revealed the relative advantages and limitations of each approach. The research findings indicate that successful nursing care delivery requires consistent performance across all evaluated criteria rather than excellence in isolated areas. The analysis highlights the importance of integrating various nursing care aspects and maintaining high standards across all metrics. These results offer valuable insights for healthcare administrators and nursing professionals in developing and implementing effective nursing care strategies. The study concludes that comprehensive, balanced approaches to nursing care led to optimal healthcare outcomes and patient satisfaction. This research Adds to the expanding collection of research on healthcare quality assessment by demonstrating the utility of multi-criteria decision-making methods in evaluating nursing care effectiveness. The findings provide a framework for healthcare institutions to assess and enhance their nursing care delivery systems while emphasizing the importance of maintaining balanced performance across multiple healthcare delivery metrics.

Keywords: Patient care in nursing, Clinical care for patients, Provision of nursing care, Comprehensive nursing care, Nurse-led patient care, Patient Outcomes, Quality of Care, Patient Feedback, Nursing Skills.

1. INTRODUCTION

Nursing care is now recognized as a competitive field, where patients are viewed as customers and consumers in healthcare. While technically competent care is generally expected as a standard, patients place significant importance on the personal aspects of the care provided by nursing staff. Nursing care is defined as the promotion of health, assistance, support, education and empowerment of patients by unlocking their own resources. It is built on communication and collaboration, aiming to address the global and personal needs related to daily life, which may be affected by illness. Patient satisfaction is a subjective assessment of cognitive and emotional reactions, shaped by how well expectations are met of exceptional nursing care and the care delivered. Nursing care is considered the most critical factor in how patients evaluate their satisfaction with healthcare services. While the importance of