Chapter 10
Enhancing Business Applications in ENT Diseases Management Through Data Visualization

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ABSTRACT

This qualitative study investigates the impact of data visualization on business applications in the management of ear, nose, and throat (ENT) diseases. Through semi-structured interviews with ENT specialists, hospital administrators, and IT experts, the study explores the role of data visualization tools in enhancing operational efficiency, clinical decision-making, resource management, and patient engagement within ENT clinics. Preliminary analysis of interview data reveals that data visualization tools streamline clinic operations, improve diagnostic accuracy, optimize

resource allocation, and empower patients to actively participate in their treatment plans. These findings underscore the significant potential of data visualization in transforming ENT clinics into more efficient and patient-centric healthcare settings. Further research is needed to delve deeper into the implementation strategies and long-term impacts of data visualization tools in ENT diseases management.

1. INTRODUCTION

The management of Ear, Nose, and Throat (ENT) diseases poses unique challenges in healthcare, necessitating efficient resource allocation, accurate diagnosis, and personalized treatment plans (Sabahath, et al, 2024).

Data visualization tools offer promising solutions by transforming complex medical data into actionable insights (Khan, et al, 2024). However, the specific impact of data visualization on business applications in ENT diseases management remains underexplored (Zyoud, et al, 2023).

This paper aims to address this gap by investigating the role of data visualization in enhancing business applications related to ENT diseases management. Through qualitative research methods, the study seeks to identify key insights and best practices in utilizing data visualization tools in this context. In the current study focusing on enhancing business applications in ENT diseases management through data visualization, several key concepts are utilized.

Ear, Nose, and Throat (ENT) Diseases Management

This concept refers to the medical practice dedicated to diagnosing, treating, and managing conditions affecting the ears, nose, and throat (Priya, et al, 2023). ENT diseases encompass a wide range of conditions, including ear infections, sinusitis, tonsillitis, and hearing loss (Khatri, et al, 2023).

Data Visualization

Data visualization involves representing data in visual formats such as charts, graphs, and dashboards to facilitate understanding, analysis, and decision-making (Afzali, et al, 2023). In the context of the study, data visualization tools are used to transform complex medical data related to ENT diseases into visual representations that are easier to interpret and act upon (Petrucci, et al, 2023).

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