

Chapter 8

The Impact of Evolving Technologies on Restaurant Consumer Health: A Systematic Review

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ABSTRACT

As technological facilities and devices become increasingly popular in restaurants, restaurant consumers are increasingly influenced by technologies. With the increase in consumer health needs, the impact of technology on consumer health has gradually received more attention. This study employs bibliometrics and thematic analysis methods to review and analyse 52 English journal articles from WoS and Scopus from five aspects: research focus, time overlay, methodological characteristics, theoretical framework, and research topics. The results reveal that previous studies have explored the relationship between various types of restaurant technology and consumer health behaviours, health literacy, physical health, mental health, social health, and health literacy from multiple disciplines. In addition, existing studies mainly focus on the impact of health information presented by technology on consumer health. Finally, after a comprehensive review and summary of previous studies, this study puts forward specific suggestions for future research based on the gaps in existing research.

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INTRODUCTION

With the improvement of people's living standards, consumer demand for the restaurant industry is no longer limited to meeting basic dietary needs but has expanded to pursue added value offered by restaurants. For example, consumers' demand for personalization, speed and variety of restaurant products is increasing (Ma et al., 2023; Manhas et al., 2024). The application of technology in the restaurant industry adapts to these increasingly diversified needs of consumers. For example, the smart ordering system meets consumers' demand for personalized product combinations, and the restaurant's self-service checkout platform meets consumers' demand for speed (Gu et al., 2023; Wong et al., 2022). While meeting the diverse needs of consumers, the application of technology in the restaurant industry also has some basic advantages. For example, compared with human employees, the services provided by robot waiters are more advantageous and attractive in terms of quality stability and accuracy (Zhang et al., 2022).

With the diversification of consumer needs, the demand for healthy products in the restaurant industry has also been gradually increasing. Especially affected by global events related to health and hygiene, such as COVID-19, consumers' attention to health needs has been further enhanced, and health problems in restaurants have gradually been exposed to the public's attention (Dai et al., 2022). Restaurant consumers pay more attention to the quality of food and beverages, the nutritional value of food, and even the impact of services on consumers' physical and mental health (Ganesh, 2024; Mahmoud et al., 2024). Some technologies that can be applied in restaurants can meet consumers' health needs to a certain extent. For example, the smart ordering system can provide a more balanced food combination according to consumers' needs, which not only makes the best use of food's nutritional value but also supports consumers' physical health by improving the dietary structure (Mandracchia et al., 2022).

However, limited research have focused on exploring the impact of restaurant technology on consumer health. Many related studies are scattered across research on other topics. In particular, most of the research on how restaurant technology affects consumer health is included in the research of other topics. However, as consumers' health needs continue to increase, researchers and restaurant managers need to have a deeper understanding of how restaurant technology impacts consumers' health. In addition, health includes multiple dimensions. According to the recommendations of the World Health Organization, health refers not only to physical health but also to mental health and social health (The World Health Organization, 1946). At the same time, some scholars point out that while paying attention to individual health status, we should also pay attention to their health behaviours and health literacy (Rudd et al., 2023). The limited existing articles that focus on the impact of restaurant technology on consumers only explore it from a single health dimension. For example, Abell et al. (2024) proved through 4 studies that the digital ordering system in restaurants will increase the proportion of consumers choosing unhealthy foods. Therefore, there is still a lack of research exploring the impact of restaurant technology on consumers' health experience from a holistic perspective.

Therefore, in the context of a lack of research to describe how restaurant technology affects consumer health in an overall manner, this study attempts to extract and integrate relevant clues from existing research. This study aims to enrich the research perspectives related to restaurant technology, provide theoretical support for researchers to explore restaurant consumer health, and emphasize the important role of the rational application of restaurant technology in improving consumer health.

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