



Awareness And Perception of Hoteliers Towards the Use of Artificial Intelligence Tools in The Hotel Industry

Ms. Monika Pedgaokar¹, Ms. Rutu Modi² and Dr. Mona Mehta³

Temporary Assistant Professor¹, Temporary Assistant Professor² and Assistant Professor³

Department of Family and Community Resource Management,

Faculty of Family and Community Sciences,

The Maharaja Sayajirao University of Baroda, Vadodara.

Date of Submission: 07-05-2026

Date of Acceptance: 17-05-2026

ABSTRACT

Artificial Intelligence technology, boosting hospitality efficiency is virtually endless, as it tends to range from steadily increasing personalisation to tailored hospitality services. The hotel industry has always been at the forefront of innovation, constantly seeking new ways to enhance guest experiences and improve operational efficiency. In today's world, the advent of artificial intelligence has presented exciting opportunities for hotels to revolutionize their services in an evolving hospitality world. Through Artificial Intelligence, hotels can provide round-the-clock assistance to guests, addressing their queries, handling reservations and even suggesting personalized recommendations. Artificial Intelligence also use to monitor and predict maintenance needs in hotel rooms, optimize pricing and inventory decisions, forecast demand and adjust room availability accordingly, optimize energy efficiency, and reduce the costs associated with managing and operating the hotel. Hotel industry professionals need to understand the use of AI tools and latest trends in artificial intelligence because it can significantly impact the way they operate and provide services to the guests. The aim of the present study is to find out the level of awareness towards the use of artificial intelligence in hotel industry among hoteliers. The study was comprised of 90 respondents through purposive sampling technique wherein questionnaire was selected as a tool. The study was beneficial to the hoteliers to gain insight towards the use of artificial intelligence and relevant skills to pursue career in hospitality firms which will contribute to shape the future of technology and will also help in attaining SDG Goal 9 (Industry, Innovation and Infrastructure).

Key words: Artificial Intelligence, Awareness, Hoteliers, Hotel Industry.

I. INTRODUCTION

"Atithi Devo Bhava," a revered principle in Indian culture, encapsulates the essence of hospitality, emphasizing the profound respect and reverence accorded to guests. Rooted in ancient Indian scriptures, this ethos advocates treating guests with utmost sincerity, warmth, and generosity, considering them as embodiments of the divine (Rashid, 2020). This cultural belief underscores the significance of hospitality as a sacred duty, transcending mere transactional interactions to foster meaningful connections (Sharma, 2018).

In the realm of modern hospitality, "Atithi Devo Bhava" assumes renewed relevance, serving as a guiding philosophy for hotels, resorts, and other establishments striving to provide exceptional customer experiences. By embracing this principle, hospitality businesses aim to create an environment where guests feel valued, cherished, and deeply cared for. Every interaction, from the moment a guest arrives until their departure, is infused with genuine warmth and attentiveness, leaving an indelible impression on their hearts and minds (Singh, 2019).

At the core of "Atithi Devo Bhava" lies a commitment to surpassing customer expectations and exceeding standards of service excellence. Recognizing that human interaction forms the cornerstone of hospitality, establishments endeavor to cultivate a culture of empathy and anticipation, wherein every guest's needs are anticipated and addressed proactively (Kumar & Sinha, 2021). From personalized greetings to bespoke experiences tailored to individual preferences, the goal is to forge emotional connections that endure beyond the duration of their stay (Patel, 2022).

In recent years, the integration of technology has emerged as a pivotal enabler in augmenting the delivery of hospitality services while upholding the ethos of "Atithi Devo Bhava."



Recognizing the potential of artificial intelligence (AI) to enhance operational efficiency and elevate guest experiences, forward-thinking hoteliers have embraced technological innovations to redefine service standards (Buhalis & Leung, 2018).

AI-powered solutions offer a myriad of benefits to the hospitality industry, ranging from personalized guest interactions to predictive analytics for resource optimization. Through AI-driven chatbots and virtual assistants, hotels can offer round-the-clock assistance to guests, addressing inquiries, handling reservations, and delivering personalized recommendations with unparalleled efficiency (Jabeen, Al Zaidi, & Al Dhaheri, 2022). Moreover, AI algorithms can analyse vast amounts of data to forecast demand, optimize pricing strategies, and enhance revenue management practices, thereby maximizing profitability while ensuring guest satisfaction (Franklin, 2018).

The adoption of AI in hospitality management underscores a strategic imperative for industry professionals to stay abreast of emerging trends and technological advancements. As custodians of the guest experience, hoteliers must continually explore innovative ways to leverage AI tools and platforms to enhance service delivery and operational performance. Research studies exploring the impact of AI on customer retention, guest satisfaction, and the adoption of automation technologies offer valuable insights into evolving consumer preferences and industry dynamics (Chamelian, 2018).

Despite the transformative potential of AI in hospitality, there remains a need for empirical research to gauge the awareness and perspectives of hoteliers towards its implementation. Addressing this gap in the literature, studies focused on understanding the attitudes, challenges, and opportunities associated with AI adoption in hotels can inform strategic decision-making and drive innovation within the industry (Mara Solutions, 2023). By aligning technological investments with the enduring principles of hospitality embodied in "Atithi Devo Bhava," hotel businesses can chart a path towards sustainable growth, resilience, and enduring guest loyalty (Echo Innovate IT, 2023).

Therefore, this paper seeks to contribute to a deeper understanding of the awareness and perception of hoteliers towards the use of AI in the hotel industry. By unravelling the complexities of hoteliers' awareness and perception towards AI, this study aims to empower hoteliers with the knowledge and insights needed to harness the full potential of AI and drive sustainable growth and

innovation in the hospitality sector (Beatson, Coote, & Rudd, 2006).

Objectives of the study:

1. To assess the level of awareness towards the use of artificial intelligence in hotel industry among hoteliers.
2. To explore the perception of hoteliers towards the use of artificial intelligence in the hotel industry.

II. METHODOLOGY

The present study was conducted with the aim of assessing the level of awareness and perception of hoteliers towards the use of artificial intelligence (AI) in the hotel industry. Employing a descriptive research design, the study focused on hoteliers in Vadodara City, Gujarat, India, considering them as the unit of inquiry within the hospitality industry. The research utilized a purposive sampling technique to select a sample size of 90 hoteliers. This method allowed researchers to deliberately choose participants who possessed relevant knowledge and experience within the targeted population. A self-structured questionnaire was developed to collect data, utilizing Google Forms as the platform for distribution and response collection. The questionnaire comprised of two sections to comprehensively address the research objectives. In Section I, background details of the hoteliers were captured to gain insights into their demographics, professional experience, and organizational affiliations. This information provided context for understanding the perspectives and attitudes of participants towards AI in the hotel industry. Section II of the questionnaire focused on assessing the awareness of hoteliers regarding the use of artificial intelligence tools in the hotel industry. This section included a series of statements designed to gauge respondents' familiarity with AI technologies, their understanding of its potential applications within the hospitality sector, and their perceptions of its relevance and impact on business operations. The response structure for the awareness scale featured three options: "Aware," "Undecided," and "Unaware." This allowed participants to indicate their level of familiarity and confidence in their knowledge of AI-related concepts and technologies, providing nuanced insights into their awareness levels. To ensure the validity of the research instrument, content validity was established by soliciting feedback from 11 hospitality industry experts. Their input helped refine the questionnaire, ensuring that it effectively captured the relevant



constructs and addressed the research objectives in a comprehensive manner. Data collection was conducted with the consent of the participating hoteliers, emphasizing ethical considerations and respecting the privacy and autonomy of respondents. By adhering to ethical guidelines and obtaining informed consent, the study upheld principles of research integrity and participant welfare. Overall, the research methodology adopted in this study facilitated a systematic and rigorous investigation into the awareness and perceptions of hoteliers towards the use of artificial intelligence in the hotel industry. By employing a descriptive research design, purposive sampling technique, and a well-structured questionnaire, the study aimed to

generate valuable insights that could inform strategic decision-making and contribute to the advancement of AI adoption in the hospitality sector.

III. MAJOR FINDINGS OF THE STUDY

3.1 Background information

The findings for the background characteristics revealed that more than one-half of the respondents' (70per cent) age ranged between 41-50 years, more than one-half of the respondents (67per cent) were males and it was also found that more than one-half of the respondents (58per cent) were Graduates (Fig.1).

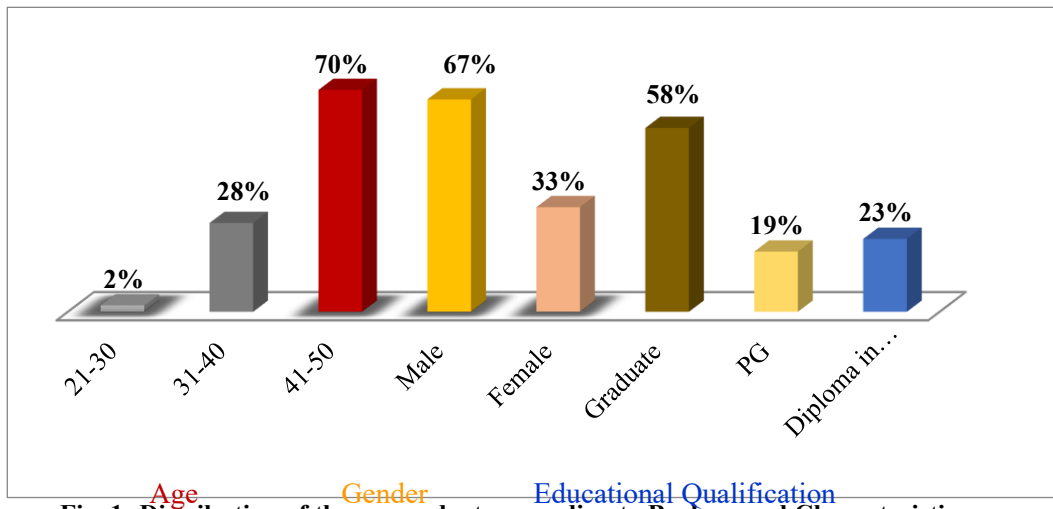


Fig. 1: Distribution of the respondents according to Background Characteristics

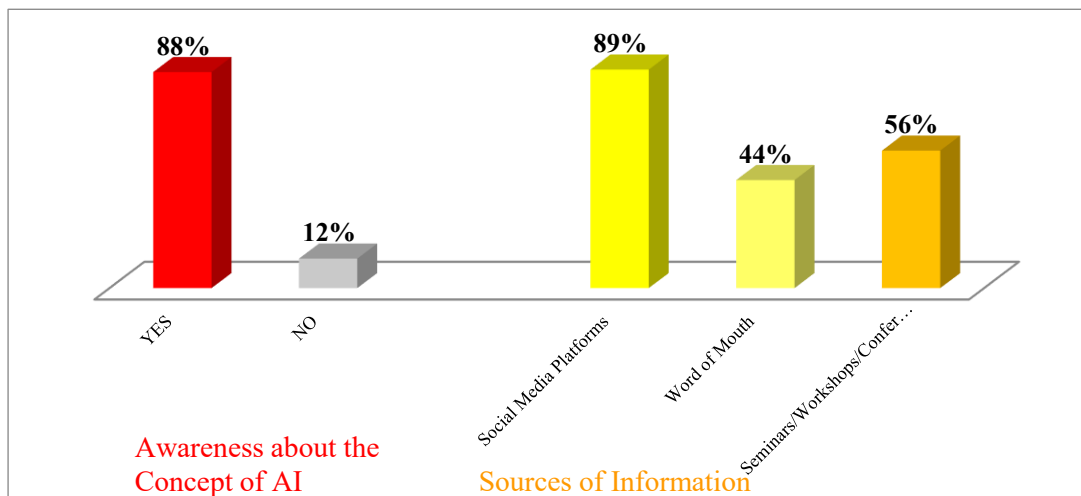


Fig. 2: Distribution of the Respondents according to Awareness and Sources of Information regarding concept of Artificial Intelligence in the Hotel Industry



The data on Awareness and Sources of Information regarding concept of Artificial Intelligence in the Hotel Industry revealed that majority of the respondents (88per cent) knew about the concept of Artificial Intelligence and (89per cent) and this information was revealed through social media (Fig.2).

3.2 Level of awareness towards the use of artificial intelligence in hotel industry

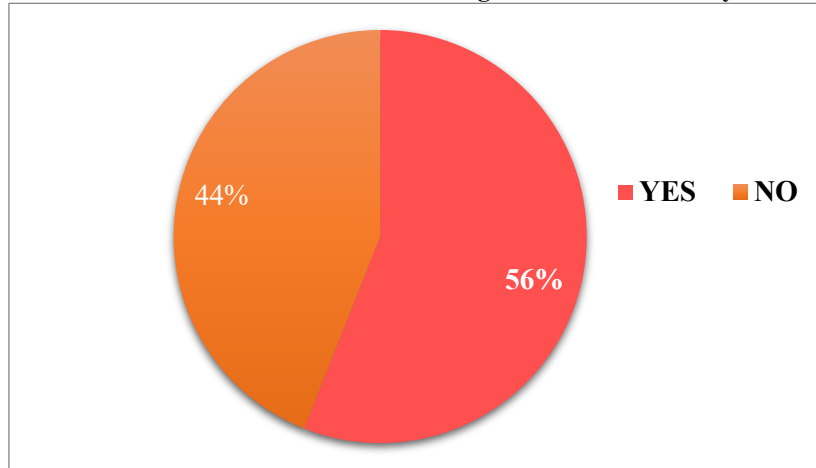


Fig. 3: Distribution of the Respondents according to level of Awareness about Types of Artificial Intelligence Tools used in the Hotel Industry

The findings revealed that more than one-half of the respondents (56per cent) were aware about the various types of Artificial Intelligence Tools used in the Hotel Industry while remaining less than one-half (44 per cent) were unaware.

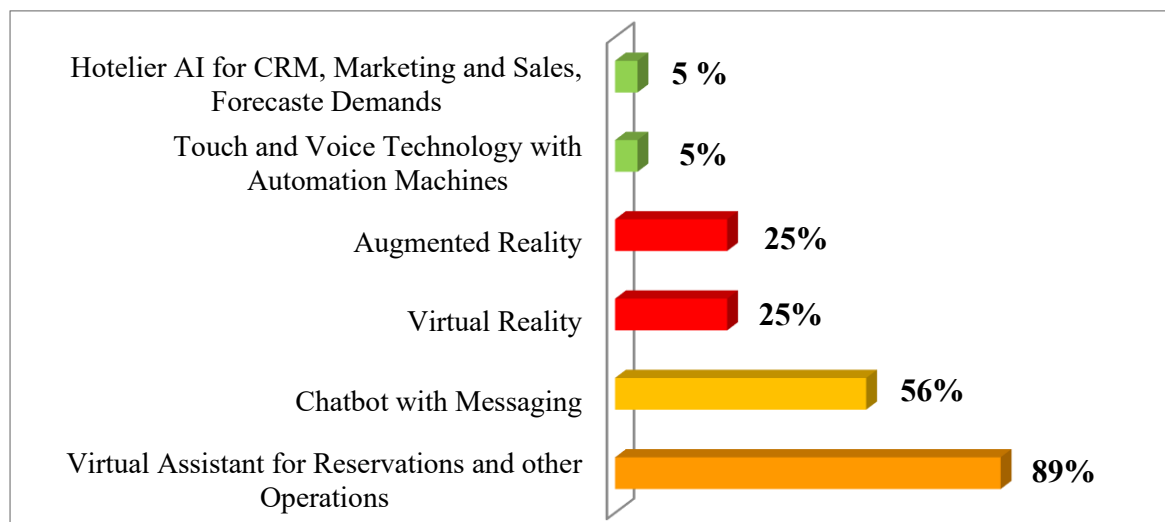


Fig. 4: Distribution of the Respondents according to the Actual Utilization of AI Tools in Hotels

The data on Actual Utilization of AI Tools in Hotels revealed that majority of the respondents (89per cent) were currently utilizing Virtual Assistant for Reservations, Room Controlling system, Room services whereas, only one-fifth of the respondents (25per cent) were utilizing virtual and augmented reality currently.

Additionally, the findings also revealed that more than one-half of the respondents (56per cent) were aware about the use and benefits of artificial intelligence in terms of hotel operations, such as; chatbots and virtual assistants helps in reservations, answering questions of the guests and providing recommendations, improves



housekeeping room assignments and maintenance by using sensors.

The data revealed that more than one-half of the respondents (58 per cent) were aware about the use and benefits of artificial intelligence in terms of guest experiences, such as; Improving personalization and recommendation engines, automation of repetitive tasks, virtual assistants, smart room technology and concierge services, Enhances safety and security by monitoring for potential threats.

The Findings revealed that less than one-fourth of the respondents (22 per cent) were aware about the use and benefits of artificial intelligence in terms of hotel revenue management and Human Resource Management., such as; helps to target the right guests with the right offers at the right time and optimize pricing and availability to maximize revenue, Improves to personalize pricing and offers to individual guests based on their preferences, past behaviour, and demographics, Interacts with job applicants and provide personalized assistance and

information about open positions and the application process

The data revealed that almost one-third of the respondents (32 per cent) were aware about the use and benefits of artificial intelligence in terms of sales & marketing, such as; helps hotel marketers to focus on strategic activities and analyze large amounts of data, assists hotels in monitoring social media platforms and identifying customer feedback, sentiment to respond promptly and improve the guest experience, assists in real-time analytics to track the performance of group sales and identify areas for improvement, market conditions, guest behaviour.

3.3 Perception towards the use of artificial intelligence in hotel industry

This section dealt with examining the distribution of respondents according to their perception towards the use of Artificial Intelligence (AI) in hotels, focusing on their attitudes and viewpoints regarding its adoption in the hospitality industry.

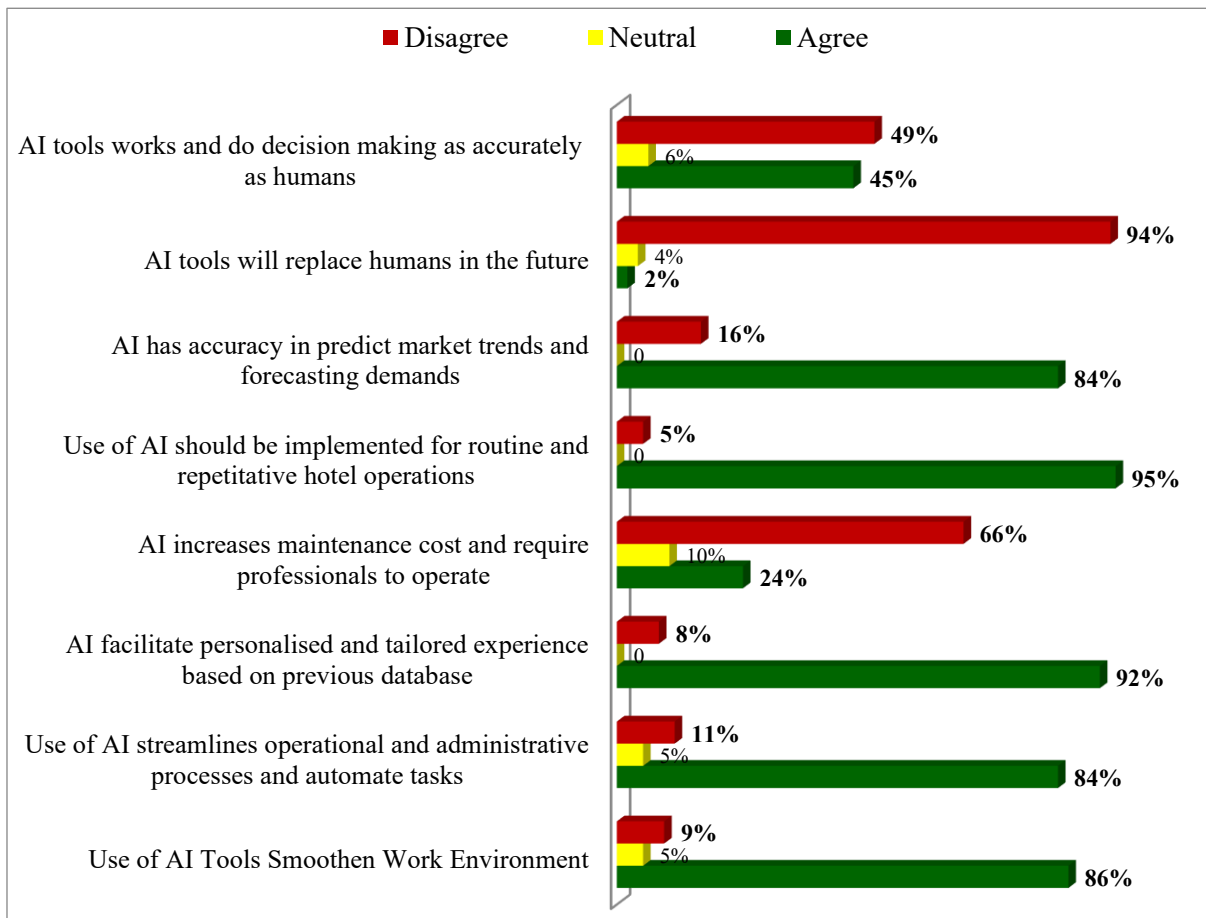


Fig. 5: Distribution of Respondents according to Perception towards the use of AI in Hotels



The findings of perception towards the use of AI in Hotels revealed that majority of the respondents agreed that use of AI should be implemented for routine (95per cent), repetitive hotel operations and AI facilitates personalised and tailored experience based on previous database (92per cent) while majority of the respondents disagree with AI tools will replace humans in the future (94 per cent), and more than one-half (66 per cent) of the respondents disagreed on AI increases maintenance cost and require professionals to operate.

IV. CONCLUSION

The present study revealed that a majority of the respondents were aware of the concept of Artificial Intelligence (AI). However, only about half of the respondents demonstrated knowledge of the various AI tools used in the hotel industry. Furthermore, it was observed that approximately one-third of the respondents were aware of the applications and benefits of AI in key areas such as hotel revenue management, sales, and marketing.

The findings further indicated that a majority of respondents supported the implementation of AI for routine and repetitive hotel operations. Respondents also acknowledged that AI facilitated personalized and tailored guest experiences through the effective use of existing customer data.

The study highlighted that the effectiveness and efficiency of AI systems were largely dependent on the competency of their users. Inadequate knowledge or improper use of AI technologies resulted in customer dissatisfaction and reduced service quality. Therefore, it was concluded that structured education, training, and skill development initiatives were essential for hospitality professionals to enhance their understanding and effective utilization of AI, thereby improving operational efficiency and service delivery within the hotel industry.

From a broader perspective, the adoption of AI in hotels also contributed to sustainability by optimizing resource utilization, reducing operational wastage, and supporting environmentally responsible practices. Future research could further explore the long-term impact of AI on sustainable hotel operations and examine its role in enhancing customer satisfaction and organizational performance across diverse hospitality settings.

REFERENCES:

- [1]. Beatson, A., Coote, L. V., & Rudd, J. M. (2006). Determining consumer satisfaction and commitment through self-service technology and personal service usage. *Journal of Marketing Management*, 22(7-8), 853-882.
- [2]. Buhalis, D., & Leung, R. (2018). Smart hospitality—Interconnectivity and interoperability towards an ecosystem. *International Journal of Hospitality Management*, 71, 41-50.
- [3]. Chamelian, S. (2018, May 6). How artificial intelligence will change the hospitality industry. *Insights*. Retrieved February 3, 2019, from <https://insights.ehotelier.com/insights/2018/05/06/artificial-intelligence-will-change-hospitality-industry/>
- [4]. Echo Innovate IT. (n.d.). Artificial intelligence in the hospitality industry. Retrieved August 5, 2023, from <https://echoinnovateit.com/artificial-intelligence-hospitality-industry/>
- [5]. Franklin, T. (2018, August 5). 5 reasons AI won't replace humans... It will make us superhuman. *Hackernoon*. Retrieved August 5, 2023, from <https://hackernoon.com/5-reasons-ai-wont-replace-humans-it-will-make-us-superhuman-413c499e1e68>
- [6]. Jabeen, F., Al Zaidi, S., & Al Dhaheri, M. H. (2022). Automation and artificial intelligence in hospitality and tourism. *Tourism Review*, 77(1). <https://doi.org/10.1108/TR-09-2019-0360>
- [7]. Kumar, R., & Sinha, P. (2021). Empathy and anticipation in the hospitality industry: An analysis. *Journal of Hospitality and Tourism Insights*, 4(2), 123-139.
- [8]. Mara Solutions. (n.d.). Take hotel management to the next level with AI: Essential tools every hotelier needs. Retrieved August 5, 2023, from <https://www.mara-solutions.com/post/take-hotel-management-to-the-next-level-with-ai-essential-tools-every-hotelier-needs>
- [9]. Patel, A. (2022). Personalized greetings and bespoke experiences: The future of hospitality. *Hospitality Review*, 38(4), 67-78.
- [10]. Rashid, S. (2020). "Atithi Devo Bhava": The cultural significance of hospitality in India. *Cultural Studies Review*, 15(1), 45-59.
- [11]. Sharma, P. (2018). Hospitality as a sacred duty: The philosophy of "Atithi Devo



- Bhava." *International Journal of Cultural Studies*, 12(3), 205-217.
- [12]. Singh, R. (2019). The impact of "Atithi Devo Bhava" on modern hospitality practices. *Journal of Hospitality Management*, 30(2), 85-94.