Discovering the magical rewards of embracing green practices in the realm of hospitality, with a focus on luxury hotels in Oman[1]

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ABSTRACT

This study aimed to understand guests' perceptions of and satisfaction with green practices in luxury hotels. This study used a quantitative research approach and descriptive research design. A purposive sampling technique was adopted for this study, and data were collected through a survey of 153 participants. 79.7% stated that the purpose of their visits was leisure. Green practices include energy and water savings, eco-friendly services, and the recycling of materials. The study found a positive correlation between guest satisfaction, green products, service offerings, and guest content in green environments. However, no association was found between green prices, promotions, and customer satisfaction. Guests' perceptions of luxury hotels in Oman that adopted green practices gained a competitive advantage (4.515). Finally, the study found a positive correlation between luxury hotels' green practices and visitor satisfaction, indicating a significant impact of these practices on guest satisfaction.

KEYWORDS

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[1] The ethics committee permission required to collect the data used in this study was obtained from the Oman Tourism College Research Committee on March 21, 2024.

INTRODUCTION

Green practices significantly impact consumer satisfaction because the public is interested in green products or services and wants to live a green lifestyle (Tan et al., 2020). By the late 1980s and the early 1990s, green marketing gained glory and became in great demand when customers were alerted to the importance of the environment and their own safety (Amin et al., 2013). Punitha et al. (2016) stated that green practices are the process of offering eco-friendly products, applying the reduce, reuse, and recycling principle, reducing the emission of harmful gases into the atmosphere, and thus, adopting environmental practices. Mohamad et al. (2014) stated that customers expect the hotels to adopt green solutions, refraining from waste of food and energy, reducing emissions of toxic waste, and recycling wherever possible. However, Zengeni (2013) stated that in more developed or developing countries, many customers do not mind spending extra money to preserve the environment, but this is not the case in underdeveloped countries. Kathambi (2014) stated that green practices refer to utilizing a company's resources more efficiently and effectively. Besides, Yusof (2014) stated that green practices in the hotel industry are still in their early stages and that hotel management requires practical solutions for their development.

The need to offer more services to potential customers is increasing in an increasingly competitive environment. However, green practices can be innovative and offer competitive advantages (Yusof et al., 2017). By practicing this strategy, an organization may obtain the newest and most innovative products for its customers. Moreover, companies are going green by adopting eco-friendly tools and reaping maximum benefits in terms of customer satisfaction and loyalty (Kathambi, 2014). Kotler and Keller (2016) defined green marketing as the practice of promoting, producing, reclaiming, and packaging products in ways that are environmentally concerned and responsive to ecological interests. Furthermore, the global economy is growing rapidly, which makes hotel competition more important and intense (Djakasaputra et al., 2020). Everyone is in a race to gain maximum profits and customers, and the only choice for the hotel industry is to provide maximum benefits to customers (Yusof, 2014). Amin et al. (2013) stated that the application of green practices in the hotel industry is a significant tool practiced by several hotels, including offering durable and ecological products and services to their customers. However, the adoption of green techniques differs between luxury and middle-to-low-range hotels (Hsiao et al., 2018).

So far, only two studies in Oman have discussed sustainable or green hotel practices. The first study, conducted by Al Ghazali et al. in 2021, focused on sustainable practices in international chain hotels in Muscat, Sultanate of Oman. However, this study focused on hotels in Muscat, the capital city of Oman, and focused on only two luxury hotels with only 40 respondents. The second study conducted by Byrne and Abdul-Ghani in 2016 was on Gauging the Hospitality Industry's Awareness and Commitment to Sustainability Practices: The Case of the Hospitality Industry in Muscat. This study was also conducted in Muscat, and of the 12 surveys collected, three 5-star hotels, five 4-star hotels, three 3-star hotels, and one 2-star hotel responded to the survey. As a result, the present study, which is highly significant and closes the gap in the literature, focuses on luxury hotels throughout Oman, and the study addresses the following research objectives:
1. To determine guests' perceptions of the green practices adopted by luxury hotels in Oman.
2. To analyze the satisfaction of guests with the green practices adopted by luxury hotels in Oman.

LITERATURE REVIEW

Hotels that show environmental responsibility are called environment-friendly or green hotels (Gerdt et al., 2019). Abdou et al. (2020) stated that balancing social inclusion, environmental sustainability, and economic prosperity is important to achieve sustainable development. Additionally, Gitobu & Nojoroge (2015) stated that to achieve sustainable development, the foremost purpose of which is to fulfill the needs of the present green hotel

industry without compromising the needs of future generations, there is a considerable need to implement effective green practices to fulfill the demand of ultimate hotel industry users (Baker et al., 2014). Sustainability was used to understand the concept of limited growth. However, Nayak and Singh (2013) state that hotels that practice green initiatives will eventually increase their reputation, goodwill, and customer trust. When the majority of customers trust your hotel, they will select it for future use, and they will also promote it. Therefore, it can be said that sustainability brings such customers who have the ability to increase sales volume by promoting the hotel in their social or personal cycle.

Sivesan et al. (2013) stated that the worldwide climatic changes are drastic, such as rising sea levels, melting of the poles, and extreme weather. These issues have made the public much more aware of and sensitive to greener solutions. This allows hotel management to adopt green solutions to earn customer loyalty (Yusof et al., 2017). Gitobu & Nojoroge (2015) also identified another reason for adopting green practices, which is to be at the top of the list in a competitive environment, as competition among hotels has reached its peak, and every hotel is in the race to obtain maximum market share. Chang et al. (2024) discovered strong links between consumers' revisit intentions and eco-friendly hotel services, green procedures, and ecological awareness. Further, Wang et al.'s (2024) study discovered a positive association between sustainable hotel procedures and consumer citizenship behavior, implying that green hotel practices work as an external stimulant that impacts citizenship activity. Additionally, Wong and Lai (2024) discovered that guests are reasonably aware of standard green practices in hotels; they further stated that explicit green messages in hotels have a greater impact than subtle green messages, especially in minimizing hotel shower time and overall water usage.

Baker et al. (2014) and Al Ghazali et al. (2021) stated that it is important to present sustainable products to satisfy the needs and wants of customers in the hotel industry. Hotels may adopt green strategies in various other ways. According to Yusof (2014), hotels must partner with environmentally relevant organizations. For example, many hotels in the United States of America associate themselves with environmentally concerned organizations, such as the Environmental Protection Agency (EPA) and the United States Green Building Council. These measures were adopted because of the pressure the hotel industry faces from its customers, business partners, environmentally concerned organizations, and global climatic conditions (Hsiao et al., 2018).

Mohamad et al. (2014) mentioned that green hotels and resorts are significant sources of a clean environment, as pollution levels have increased to a dangerous level nowadays. Therefore, there is a need to develop hotels or resorts that can provide a peaceful and healthy environment. Moreover, Zengeni (2013) stated that the area of focus for green hotels and resort management is to train staff to provide their best greening services to customers so that more customers can be attracted to green hotels. This information is beneficial, especially for managers or marketers who aim to establish a green hotel industry in the near future because the treatment or dealing in green hotels differs from other ordinary hotel industries. Moreover, Gitobu and Nojoroge (2015) stated that green hotels must offer suitable prices by considering product characteristics. However, Zengeni (2013) stated that green practices are complex and should include recycling methods. This method includes water conversion from polluted particles to clean water, as is the air pollution cleaning process.

Green Hotel Industry Practices

The hotel industry is one of the many industries that face criticism for being a source of environmental degradation because of its massive power requirement, water usage, heating system, large amount of laundry, high waste output, and non-eco-friendly products being used by housekeeping (Nayak & Singh, 2013). This preceding image of the hotel industry compelled the management to change their ways and become 'green.' Gitobu and Nojoroge (2015) stated that several factors determine hotels' need to adopt green practices. One such factor is the needs and expectations of the customer. To fulfill this need, hotels must provide the green products and services that are in demand, and they also need to provide additional information so that users can easily access the hotel's services (Noor et al., 2014). Moreover, Aljarah (2020) stated that one of the main reasons hotels adopt green practices is competitive pressure and the country's

innovation level. Hotels should adopt green practices in the marketplace if competition among rivals is high. Otherwise, it would be difficult for them to survive. Another reason hotels adopt green practices is the fulfillment of corporate social responsibility. It is not a legal obligation of the hotel industry to fulfill its corporate social responsibility, but if a hotel does, it enjoys a massive ratio of customer attention (Aljarah, 2020). As far as green practices and techniques are concerned, the adoption of corporate social responsibility is a significant step forward as it spreads awareness in the general public regarding sustainable development, and with the ever-increasing environmental problems, this is a major achievement for this industry as a whole (Amin et al., 2013).

In addition, Gao and Mattila (2014) argued that the application of green marketing enables hotels to compete in a competitive setting as it provides an extra benefit to the hotel that is applying green marketing to its green customers. It also significantly impacts sustainability because green marketing has made hotel services more efficient and, to date, according to customer needs (Yusof, 2014). According to Sivesan et al. (2013), hotels must exercise methods that will have a reduced impact on the environment, such as the use of renewable energy sources, saving natural resources (especially water), controlling carbon emissions, limiting the use of synthetic materials, increasing the use of organic and biodegradable materials, energy-efficient systems, and recycling where possible. Additionally, Punitha et al. (2016) specified that hotels can implement green practices without much difficulty, for example, replacing conventional fluorescent or incandescent lights with energy savers such as LED lamps, placing recycle bins in hotel rooms and lobby areas, switching power sources from non-renewable to renewable sources, such as solar or hydro, prohibiting waste of resources, especially water, watering lush green lawns with reused water instead of freshwater that can be utilized for drinking and other purposes, and reducing food waste (Al Ghazali et al., 2021). Not all these procedures can be implemented simultaneously; however, hotel management must see which procedures are most vital and which are easy to implement, what can be done right away, and what we can include in a long-term plan (Han & Chan, 2013).

Gheorghe et al. (2023) state that promoting the understanding and awareness of green practices is another measure that hotel management may take to remind individuals, both workers and guests, of their responsibility to make the hotel more ecologically friendly. Punitha et al. (2016) stated that the young generation, especially in developing countries, is very concerned about environmental degradation as they are concerned about their future and future generations, and many such customers are aware of green hotel certification; hence, hotel management must strive to meet certification requirements. Hotels should focus on environmental architecture using sustainable materials and green roofs and aim to obtain green certifications for the hotel, including Green Globe, ISO 14000, and EcoTEL (Verma & Chandra, 2016). According to Sugianto and Kurniawan (2017), green hotels should offer green products and services, including environmental living spaces, such as green architecture, non-smoking floors, plant décor, and green meals, including organic and safe raw ingredients. Furthermore, Faust (2018) claims that green hotels should serve organic meals and, whenever possible, locally acquire food. Times News Service (2024) stated that Alila Jabal Akhdar, a luxury hotel in Oman, started its first hydroponic farm and set a new standard for regional sustainability. Hydroponics, a soilless approach that uses nutrient-rich water, enables the cultivation of organic vegetables and fruits rapidly throughout the year. The harvest includes peppers, cucumbers, leafy greens, tomato varieties, peppers, zucchini, strawberries, and blueberries.

Perceptions of Guests in the Adoption of Green Practices by Hotels

With changes in consumer perceptions, an increasing number of hotels are adopting green practices for hotel management (Verma & Chandra, 2016). According to Sivesan et al. (2013), a satisfied customer leads a hotel beyond its success level and develops loyalty towards that hotel. A loyal customer will never switch companies; instead, they will take more customers to that location. Hotels are adopting greener practices to attract loyal customers. Similarly, Punitha and Rasdi (2013) found that green practices are the biggest reason for customer loyalty, and a loyal

customer is a significant asset in the hotel industry because the need to visit hotels can never end; therefore, there is a huge need to retain customer loyalty. According to Verma and Chandra (2016), other features that influence customer perceptions of green hotels include the atmosphere of the hotel, the location of the hotel, its accessibility, eco-friendly products and services they offer to customers, and the standards of their food and other items. However, Damigos (2023) stated that the most important aspect is the hotel's pricing strategy because guests who pay high prices to fulfill their needs expect more from the hotel to provide them with maximum offers and facilities to value their money. Moreover, according to Noor et al. (2014), green hotels utilize natural resources to provide sufficient and adequate facilities to their end users at minimum prices; this strategy attracts more customers to green hotels. Furthermore, Punitha and Rasdi (2013) have mentioned the impact of environmental factors that can also be seen in customers' moods and behavior. If a hotel provides a pleasant atmosphere to its customers, it will be the most attractive tool for gaining maximum customer attention because human nature is highly attached to beautiful surroundings and clean environments. Additionally, Gerdt et al. (2014) reasoned that hotels with some natural sites and locations around them, such as parks, cultural sites, and lakes, are getting more customer visits and eventually earning excessive revenue.

According to Gerdt et al. (2019), hotels that switch to eco-friendly practices gain a two-fold benefit: first, a reduction in costs (energy, water, and other resources), and second, protection of the environment, which results in better corporate image, satisfaction of green customers, and attraction of new eco-friendly customers. These practices help hotels pass through trade barriers and explore business in a novel market (Aljarah, 2020). According to Han and Chan (2013), 83% of English and 40% of American holidaymakers and travelers prefer green hotels over non-green hotels, and 67% of tourists from Kenya do not mind paying extra to obtain eco-friendly services in green hotels. Similar attitudes were observed in Greece and France. However, this eco-friendly inclination is not uniform; this figure is reduced to only 15% when studying consumer behavior in India. The remaining 85% believed that the hotel should bear the costs of eco-friendly practices. Despite these contradictory data, it is generally observed that a large percentage of consumers appreciate substantial development practices by hotel management. However, the willingness to pay extra or compromise on the quality of service or luxury is not appreciated throughout (Damigos, 2023).

Satisfaction of Guests with the Green Practices Adopted by Luxury Hotels

Customer satisfaction is one of the most important concerns in any business. What products or services do customers choose or prefer? This question is of great significance to people in any field related to customer service (Kotler & Keller, 2016). Lee et al. (2018) stated that customer satisfaction can be achieved only by improving the quality of service; good product quality ensures customer satisfaction, and there is no alternative to customer satisfaction than fulfilling customer requirements. With the growing tide of environmentalism and increasingly severe international legislation on implementing sustainable practices, it is beneficial for the hotel business to implement green initiatives (Ndhlovu et al., 2024). This will not only satisfy the environmental needs of the present and cater to the needs of the future, but it will also give the hotel a green image, and as a result, it will earn the loyalty of its 'green customers' (Verma & Chanra, 2016). Pereira et al.'s (2021) study found that customers prefer to stay in hotels that implement green procedures, such as reducing energy and water use, purchasing environmentally friendly items, reducing hazardous products, and recycling rubbish, all of which have a direct influence on customers revisit intentions.

According to Anser et al. (2020), customers view a hotel's use of clean, renewable energy sources such as solar, wind, biomass, and hydroelectric as an "added value" feature that raises their degree of satisfaction. In addition, Chen et al. (2015) indicated that certain hotel environmental activities, such as recycling initiatives, soap and shampoo dispensers, and the use of low-energy light bulbs, have a direct and beneficial impact on guest satisfaction and the likelihood of returning. Similarly, Han and Chan (2013) stated that hotel recycling initiatives are expected to gratify guests and instill a sense of responsibility. Similarly, Berezan et al. (2013)

reported that hotel recycling strategies produce the highest levels of customer satisfaction. Reuse rules for linens and towels have been found to have a more significant impact on customer satisfaction than simple green measures (Mohd Suki, 2017; Al Ghazali et al., 2021). On the other hand, Anser et al. (2020) contend that the influence of hotel "green" activities on visitor happiness depends on guests' awareness and understanding. For instance, if visitors view the reuse of towels and blankets as a 'basic' feature of eco-friendly hotels, they anticipate it, and their experience will suffer if they are not provided. Other actions, such as buying organic and locally produced goods, only serve to increase visitor satisfaction (Berezan et al., 2013). Additionally, hotels that pay special attention to environmentally friendly products and service characteristics boost the level of guest satisfaction (Chen et al., 2015), yet service quality is an essential component for attaining visitor satisfaction (Lee et al., 2018). Furthermore, De Brito (2017) stated that the Six Senses Zighy Bay, a luxury hotel in Oman, increased guests' satisfaction to a new level after it had extended its field to organic produce. Goats, laying chickens, and milking cows are now at the resort. Guests can learn about growing herbs, gathering eggs, milking goats and cows, and preparing meals with fresh products on the farm.

Chang et al. (2024) found a favorable association between hotel visitor satisfaction and revisit intention, as well as readiness to pay a higher price. Similarly, Mohd Suki (2017) stated that green hotels have a friendly environment for their customers, which attracts more customers and provides a peaceful and relaxing atmosphere, which is the biggest reason customers are more loyal to hotels adopting green practices. Furthermore, Nayak and Singh (2013) argued that several factors are involved in customer satisfaction, such as the service quality of hotel staff, green rooms, and food quality provided to customers. However, Lee et al. (2018) stated that although green practices add value to hotel services, their service quality is the primary factor in satisfying customers, specifically in the hotel industry. Conversely, Baker et al. (2014) claimed that visitors behaved differently when staying at a hotel than when they were at home when it came to adopting eco-friendly practices because they thought that the primary reason for visiting a hotel was to enjoy comfort and luxury rather than to contribute to eco-friendly initiatives. Moreover, a happy customer brings more customers; therefore, there is a philosophy that hotels should focus on pleasing their customers instead of generating profits because satisfied customers will automatically increase the revenues of their hotel (Chang et al., 2024).

Research Hypothesis

H_1: There is no significant association exists between green products and guest satisfaction.

H_2: There is no significant association exists between green pricing and guest satisfaction.

H_3: There is no significant association between green locations (places) and guest satisfaction.

H_4: There is no significant association between green promotion and guest satisfaction.

METHODOLOGY

This study employed a quantitative methodology. According to Bryman and Bell (2015), a quantitative research approach involves gathering and evaluating numerical data using various techniques, including surveys and questionnaires. This study's research aims prompted the decision to adopt a quantitative methodology, which helped present the findings in various ways and generalize them to a more extensive range of target populations (Cresswell, 2014). According to Saunders et al. (2015), the research design is descriptive and is characterized as a research approach that explains the traits of subgroups in the target population or the phenomenon under study. Additionally, according to De Vaus (2014), this methodology emphasizes the study's subject rather than why. In other words, it defines the characteristics of a population group without concentrating on the reason for a specific occurrence. Furthermore, Cresswell (2014) pointed out that descriptive research is well-liked because it measures multiple variables while only requiring the assessment of one. Descriptive research is, therefore, suitable for this study because it adds to

the analysis and assessment of technology's potential for maximizing events in Oman and its advantages from the viewpoint of participants.

This study focused on guests aged 21 and above who stayed in five-star hotels, including Omani residents and foreigners. Non-probability sampling, which chooses participants among the population in a subjective (i.e., non-random) way, is a quick, simple, and cost-effective method of data collection since it does not require a whole survey framework, claim Saunders et al. (2015). Purposive sampling was used in this study. Using a method called purposeful sampling, the investigator chose study participants of their own choice, according to Creswell and Clark (2018). This is a specific type of non-probability sample, also referred to as a judgmental or professional one. Purposeful sampling refers to selecting a sample that represents the entire population. Purposeful sampling involves selecting a smaller, typically nonrandomly chosen population fraction. This can be achieved by selecting a sample representing the variance in the background of the population (Bryman & Bell, 2015). A questionnaire survey was used to obtain primary data for this study. According to Creswell and Clark (2018), using a questionnaire to collect data is inexpensive, straightforward, and simple. Furthermore, surveys are more dependable, and all data are up-to-date and real-time (De Vaus, 2014). Relying on prior research projects can aid in tracking the information gleaned from secondary data more precisely. Moise et al.'s (2018) questionnaire was used in this investigation and slightly adjusted to meet the needs of the current study. Six upscale hotels from different parts of Oman with five-star ratings were the target of the investigation. Data were gathered in 2024 between March and April. In total, 164 participants were included in this study. Eleven questionnaires were excluded because they were incomplete. In total, 153 responses were included in the analysis.

This quantitative study analyzed the acquired data using appropriate descriptive statistics, including Pearson's r, frequency range, percentage, rank, and weighted mean. More specifically, frequency distribution is a statistical technique used to determine the distribution of responses and the degree to which they match a particular profile, which could contain characteristics such as age, gender, marital status, or event data. The proportions were used to determine the percentage of respondents who fit a particular profile. The weighted mean was employed to determine how visitors felt about upscale hotels in Oman using eco-friendly measures. The association between the hotel's green policies and visitor satisfaction was ascertained using the inferential statistical tool, Spearman's r.

RESULTS

The respondents' demographic profiles are presented in Table 1, with 38.6% women and 61.4% men. The age group of 36–45 years old accounted for 30.7% of the total number of respondents; the next largest age group was 46–55 years old (25.5%), with 24.8 people falling into the 56+ age group. However, the 20–25 age group accounted for only 8.5%, and the remaining 10.5% were from the 26-35 age group. Regarding employment, 69.3% of respondents reported being employed, 16.3% reported being self-employed, 3.94% reported being unemployed, and the remaining 10.5% were retired. In addition to the types of visitors, 42.5 percent of participants were Omani citizens. Foreign tourists (38.6%) and residents (18.9%) also responded. Additionally, 79.7% of guests at luxury hotels stayed for pleasure- and leisure-related reasons. In comparison, 15.7% came for business purposes, and only 4.6% stayed for other purposes, including meeting friends and family and attending weddings.

Table 1.
Demographic Profile of the Hotel Guests

Description	Frequency	Percentage
Entire group	153	100
Gender		
Male	94	61.4
Female	59	38.6
Age		
20-25	13	8.5
26-35	16	10.5
36-45	47	30.7
46-55	39	25.5
56 and above	38	24.8
Employment		
Self-employed	25	16.3
Employed	106	69.3
Retired	16	10.5
Unemployed	6	3.9
Type of Guest		
Omani	65	42.5
Expatriate / Resident in Oman	29	18.9
Inbound Tourist	59	38.6
Purpose of Staying		
Business	24	15.7
Vacation: Leisure / Pleasure	122	79.7
Other, please specify	7	4.6

Table 2 lists visitors' perceptions of green practices adopted by luxury hotels in Oman. The competitive advantage had the highest mean score (4.515). This indicates that guests believe hotels implementing green initiatives have a competitive edge over rival establishments. Brand image (4.468), guest satisfaction (4.419), and environmental conservation (4.307) had the second, third, and fourth-highest mean values, respectively. This suggests that green hotel practices improve brand image, enhance guest satisfaction, and improve environmental conservation, thus, the hotel's reputation. Additionally, long-term business viability (4.253), government mandates (4.162), and guest loyalty (4.149) are ranked fifth, sixth, and seventh, respectively. On the other hand, the lowest mean scores noted for guests' perceptions of adopting green practices by luxury hotels in Oman were for cost savings and reductions (3.821), climate mitigation (3.753), and consumer demand (3.592). This implies that implementing green hotel approaches in practice can improve climate change mitigation, result in cost savings and reductions, and meet consumer demand.

Table 2.

Guests' Perceptions of Adopting Green Practices at Luxury Hotels in Oman

Guests' perception	Mean	Standard Deviation	Rank
Competitive advantage	4.515	0.921	1
Brand image	4.468	0.854	2
Guest satisfaction	4.419	0.751	3
Environmental conservation	4.307	0.934	4
Long-term business viability	4.253	0.898	5
Government requirement	4.162	0.800	7
Guest loyalty	4.149	0.688	7
Higher Revenue	4.076	0.792	8
Corporate Social Responsibility	4.013	0.862	9
Cost savings and reductions	3.821	0.965	10
Climate mitigation	3.753	0.707	11
Consumer demand	3.592	0.639	12

The three terms guests think when considering green hotels are shown in Figure 1. 'Energy and water savings, eco-friendly services and facilities, and recycling materials' were the top three terms, scoring a perfect 100%. Automatic turn-off appliances ranked fourth (80%), eco-cleaning and biodegradable toiletries fifth (78%), responsible waste disposal sites (75%), and locally sourced food seventh (70%). Additional terms chosen by the participants included limited use of plastic (60%), environmental awareness (58%), efficient operation (54%), social awareness (49%), organic food (33%), and natural setting (30%). The two terms with the lowest percentages were cleanliness (25%) and aesthetics (26%).
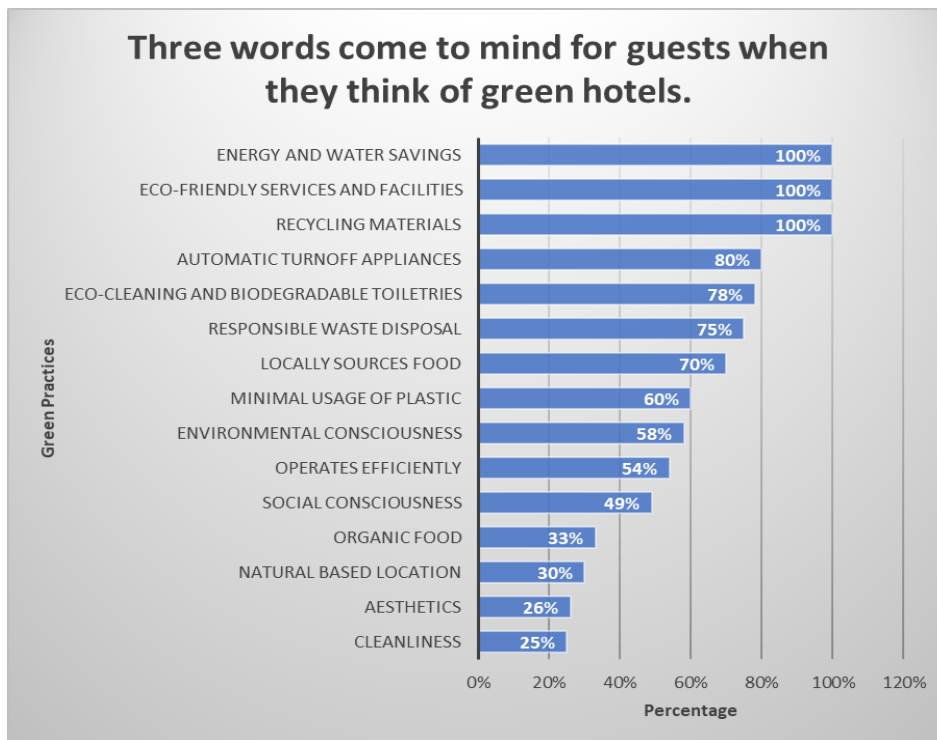

Figure 1. Three Words Come to Mind for Guests When They Think of Green Hotels

Table 3 shows the guests' satisfaction with the green practices luxury hotels in Oman, and the highest mean score noted is for 'the hotel uses energy-saving equipment and solar lights, as

well as sensors and smart thermostats, to heat and cool rooms (4.598).' This suggests that hotels use energy-saving equipment, solar lighting, sensors, and smart thermostats to heat and cool rooms and that guests are pleased with it. The second, third, and fourth highest mean scores recorded were: 'the hotel serves locally grown food, organic products, and other freshly prepared food, 4.405'; 'the hotel uses bulk soap and shampoo dispensers instead of single-use ones, 4.368'; 'the hotel's architecture is compatible with the natural environment, and it allows a lot of fresh air and natural light, 4.307'. This suggests that guests are pleased with the hotel's provision of freshly prepared meals, organic and locally grown food, and bulk soap and shampoo dispensers rather than single-use ones. In addition, they are pleased with the hotel's architecture, which blends well with their surroundings and allows for abundant natural light and fresh air.

On the other hand, the lowest mean score was noted for guests' satisfaction with green practice luxury hotels in Oman: 'the hotel educates guests about the ecological diversity around the hotel, 2.668'. This suggests that many visitors believe that the hotel does not focus on informing visitors about the ecological richness of the area. The lowest mean score was noted for 'the hotel put shades on the outside of the windows to keep the glass from heating up, 2.712'. This indicates that to prevent the glass from heating in the summer and cooling in the winter, hotels typically do not install coverings on the exterior of their windows. This is necessary because it can reduce the amount of electricity used. Additionally, the other lowest-rated mean scores include 'the hotel recycles its water and repurposes it, 2.826' and 'the hotel makes efforts to protect and promote cultural, historical, and natural resources around the hotel, 2.871'. This indicates that the hotel recycles and repurposes its water and employs specific procedures to safeguard and enhance cultural, historical, and natural resources in its vicinity.

Table 3.
Guest satisfaction with green practices adopted by luxury hotels in Oman.

Guests' satisfaction with hotel's green practices	Mean	Standard Deviation	Rank
The hotel uses energy-saving equipment, solar lights, sensors, and smart thermostats to heat and cool the rooms.	**4.598**	**0.853**	**1**
The hotel serves locally grown foods, organic products, and other freshly prepared foods.	4.405	0.767	2
The hotel uses bulk soap and shampoo dispensers, instead of single-use dispensers.	4.368	0.681	3
The hotel's architecture is compatible with the natural environment and allows for a large amount of fresh air and natural light.	4.307	0.924	4
The hotel uses water-saving showers, facets, and flush tanks.	4.257	0.751	5
The hotel uses digital platforms for communication, promotion, and feedback, thereby avoiding wastage of paper and saving the environment.	4.211	0.688	6
The hotel uses glass dinnerware and, steel cutlery and biodegradable disposables.	4.154	0.854	7
The hotel has a towel and linen reuse program in place.	3.956	0.692	8
Hotels encourage the use of reusable bags, and offer cloth bags.	3.878	0.898	9
The hotel has a green landscape design, and grows its own vegetables and leaves for use.	3.815	0.922	10
Hotels use more environmentally friendly transportation such as battery buggies, biodiesel car rentals, and eco-buses.	3.753	0.862	11
The hotel has an environmental recycling program and recycling bins are placed in many places.	3.607	0.726	12
The hotel avoids bottled water and encourages guests to fill bottles.	3.492	0.672	13
The hotel makes efforts to protect and promote cultural, historical, and natural resources around the hotel.	2.871	0.885	14
The hotel recycles and reuses water.	2.826	0.630	15
The hotel shades the outside of the windows to prevent the glass from heating.	2.712	0.733	16
The hotel educates guests about its ecological diversity around the hotel.	2.668	0.664	17

Table 4 shows that the chi-square was significant (sig. value was 0.021 < 0.05), thus rejecting the null hypothesis. This finding indicates a conclusive link between guest satisfaction and green products and service use. This implies that guest satisfaction is related to luxury hotels' environmentally friendly goods and services.

Table 4.

Chi-square: H₁: No relationship between green products and guests' satisfaction

Test	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	15.186	16	.021

Table 5 shows that the chi-square test was insignificant (sig. value is 0.217 > 0.05). Therefore, there was no evidence to reject the null hypothesis. This means there was no significant association between green prices and guest satisfaction. This suggests that guest satisfaction is not dependent on the hotel's green price.

Table 5.

Chi-square: H₂: No relationship between green price and guests' satisfaction

Test	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	14.733	20	.271

Table 6 shows that the chi-square test was significant (sig. value was 0.030 < 0.05), rejecting the null hypothesis. This means there was a significant association between green places and guest satisfaction. This indicates that guest satisfaction depends on the green place, which is the hotel itself.

Table 6.

Chi-square: H₃: No relationship between green places and guests' satisfaction

Test	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	20.217	20	.030

Table 7 shows that the chi-square test was insignificant (sig. value was 0.173 > 0.05); therefore, there was no evidence to reject the null hypothesis. This means that there was no significant association between green promotion and guest satisfaction, implying that guest satisfaction is not dependent on green promotions.

Table 7.

Chi-square: H₄: No relationship between green promotion and guests' satisfaction

Test	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	16.570	16	.173

The results in Table 8 demonstrate a strong and positive correlation between luxury hotels' green practices and visitors' satisfaction levels. The obtained p-value of 0.000 <0.05 and Spearman's coefficient of 0.615 demonstrated this. These findings suggest that luxury hotels' green practices significantly affect guests' satisfaction.

Table 8.

Relationship between hotel green practices and satisfaction among hotel guests

Variables		Hotels' Green Practices	Guest Satisfaction
Green Practices	Spearman's Correlation	1	.615*
	Sig. (2-tailed)		0.000
	N	153	153
Guest Satisfaction	Spearman's Correlation	.615 *	1
	Sig. (2-tailed)	0.000	
	N	153	153

* Correlation is significant at the 0.01 level (2-tailed).

After presenting the study's main findings, the subsequent chapter will examine the findings with those determined by the literature review. These findings are discussed along with their significance for further research.

DISCUSSION

Objective One: To determine the perceptions of guests towards adopting green practices by luxury hotels in Oman.

Table 2 presents guests' perceptions of the green initiatives adopted by luxury hotels in Oman. The highest mean score for competitive advantage is attributed to this activity. These findings align with those of Yusof et al. (2017), who found that adopting green techniques could be inventive and provide a competitive edge. In addition, a competitive climate is a factor in adopting green practices, as noted by Gitobu and Nojoroge (2015), as hotel competition has peaked and all hotels are vying for the largest market share. Furthermore, Gao and Mattila (2014) contended that using green marketing by hotels allows them to compete in the market because it gives a specific hotel, using green marketing, an advantage over its environmentally conscious clientele. Table 2 shows that green hotel practices can lead to environmental conservation. According to Figure 1, there are three phrases that respondents ranked highest in what comes to mind when they think of green hotels: energy and water savings, eco-friendly services and amenities, and recycling materials. These findings were consistent with those reported by Chang et al. (2024), Punitha et al. (2016), Yusof (2014), Mohamad et al. (2014), Sivesan et al. (2013), Pereira et al. (2021), and Gerdt et al. (2019) stated that green initiatives practiced by hotels can contribute to environmental conservation, ecological balance, and resource sustainability for future generations. The second-highest mean score was noted for guests' perceptions of adopting green practices in luxury hotels in Oman: Guest loyalty. These findings are consistent with those of Kathambi (2014) and, Yusof et al. (2017), Sivesan et al. (2013), Punitha and Rasdi (2013), and Verma and Chanra (2016). According to the authors, guests are particularly pleased with and loyal to hotels that embrace green practices.

Objective two: To analyze the satisfaction of guests with the green practices adopted by luxury hotels in Oman.

Based on Table 3, guests' satisfaction with the hotel's services includes serving locally grown food, organic products, and other freshly prepared foods (4.405). These findings correspond to those of Sugianto and Kurniawan (2017), De Brito (2017), Al Ghazali et al. (2021). and Faust (2018), who indicated that green meals include organic and safe raw ingredients and, whenever possible, locally obtained food. Another result for guest satisfaction is that the hotel's architecture is compatible with the natural environment and allows a lot of fresh air and natural light (4.307). These findings match those of Sugianto and Kurniawan (2017) and Verma and Chandra (2016), who stated that green hotel architecture is important as it minimizes environmental impact and promotes natural living. The findings in Table 4 demonstrate a conclusive link between guest satisfaction and the use of green products. This implies that guest satisfaction is related to the environmentally friendly goods and services offered at luxury hotels. The findings in Table 6 show a significant association between green places and guest satisfaction. This means that guest satisfaction depends on the green place, which is the hotel itself. These findings were consistent with those reported by Wang et al.'s (2024), Tan et al. (2020), Punitha et al. (2016), Hsiao et al. (2018), Baker et al. (2014), Gitobu and Nojoroge (2015), Al Ghazali et al. (2021), and Chen et al. (2015) stated that green initiatives could boost a hotel's image and reputation, and the commitment they make to sustainable products and services positively ties with customers. This can lead to improved consumer loyalty, trust, and favorable word-of-mouth. Furthermore, the results shown in Table 8 demonstrate a strong and positive correlation between luxury hotels' green practices and their visitors' level of satisfaction, suggesting that luxury hotels' use of green practices significantly impacts guest satisfaction.

CONCLUSION

The majority of respondents wanted to stay at luxury hotels for leisure or pleasure. Guests' perceptions of adopting green practices at luxury hotels in Oman. The study concluded that hotels adopting green practices can gain a competitive advantage, improve their brand image, improve guest satisfaction, and conserve the environment. The three words that come to mind for guests when they think of green hotels are energy and water savings, eco-friendly services and facilities, and recycling materials. According to the data, guests are satisfied with hotels that utilize energy-saving equipment, solar lighting, sensors, and smart thermostats to heat and cool rooms. The hotel prepares meals with locally grown organic products and freshly prepared dishes. It employs bulk soap and shampoo dispensers rather than single-use dispensers, and guests enjoy the hotel's design, which is environmentally friendly and allows plenty of fresh air and natural light. The study discovered a link between guest satisfaction and hotels' green product and service offerings, as well as a link between guest contentment and hotels' green environments. This implies that guests appreciate green products and places. However, there is no association between green prices and customer pleasure or green promotion and satisfaction. A hotel's green prices and promotions generally do not lead to customer satisfaction. Finally, there is a strong positive correlation between luxury hotels' green practices and their guest levels of satisfaction. These findings suggest that green practices of luxury hotels have a significant impact on guest satisfaction.

Recommendations

The study recommends the following.

- Hotels in Oman are advised to improve their organic food offerings, develop natural surroundings, and improve their aesthetics, as they are important for guests who stay in green hotels.
- Hotels should educate guests about their recycling programs to eliminate waste.
- Hotels should inform their guests of the ecology, biodiversity, and natural resources surrounding them, as they would like to visit them.
- Hotels should install window shades wherever possible to prevent the glass from heating during summer and cooling during winter.
- Hotels should recycle and repurpose their water whenever possible, and, more importantly, they should educate their customers about it so that they can be part of it.
- Hotels must avoid using plastic water bottles whenever feasible, urge guests to use reusable bottles, and provide water dispensers on hotel premises.
- Wherever feasible, the hotel should take steps to conserve and promote cultural and historical sites in the surrounding areas as guests would like to experience them.

Limitations of the Study

This study had certain limitations that must be considered. Only 153 participants completed the survey, suggesting that larger sample sizes are necessary for future studies. Furthermore, data were collected only from four luxury hotels in Oman. A wider range of other hotels in Oman should be covered to obtain a more representative sample. This study employed quantitative methods; however, future research should focus on qualitative approaches to better understand how guests perceive and are satisfied with Oman's luxury hotel green practices. Future studies should focus on other hotel types, such as four- and three-star hotels. This study focused solely on tourists' perceptions of and satisfaction with green practices. Future studies should focus on the challenges faced by guests and suggest solutions. Future studies could also focus on implementing green practices from the hotel's perspective.

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