Research article

Guests' Aesthetic experience with lifestyle hotels: An application of LDA topic modelling analysis

Shun Ying

School of Culture and Tourism, Zhejiang International Studies University, Hangzhou, China

A B S T R A C T

The purpose of this study is to systematically explore lifestyle hotel guests' aesthetic experiences. This study adopts word frequency analysis, latent Dirichlet allocation (LDA) topic modelling analysis and manual coding to systematically analyse 11,239 online reviews posted by guests from 131 lifestyle hotels in eight cities in China. A framework is developed to organize the identified themes and illustrate lifestyle hotel guests' aesthetic experiences. The framework revealed that lifestyle hotels embrace the concept of "bleisure" travel—blending business and leisure by offering high-end lodging, flexible tourism destination elements, and event services that cater to the needs of today's independent guests. The findings suggest that lifestyle hotel guests stress multiple functions of a hotel, especially the spiritual. Guided by the aesthetic experience at lifestyle hotels, hotel managers can cater to the full spectrum of hotel guests' aesthetic experience when implementing marketing strategies.

1. Introduction

Experience is considered a competitive advantage in tourism and hospitality, particularly within the high-end hotel (such as lifestyle hotel) sector [1–3]. Guests' interaction with a hotel's overall environment and internalization of what they experience can play a key role in their overall satisfaction. Environmental cues, such as lodging, servicescapes, ambience, design, atmospherics, and crowdedness, are all critical to hotel guests' experience [4–6]. Guests' experience affects eWOM intention [7] and is inseparable from the pursuit of loyalty [8] and well-being [9,10].

However, because of their complex intrinsic nature, culturally laden experiences have not been well understood by previous researchers and hoteliers. These experiences are considered to be among the most critical factors in the travel experience. Comprehending guests' experience poses a challenge because it is intricately connected to cultural background, especially the aesthetic experience dimensions of high-end hotels (such as lifestyle hotels). Lifestyle hotels demonstrate impressive artistic elements and local culture. As a form of high-end hotels, lifestyle hotels were designed to feature authentic culture, thought-provoking design and revolutionary architecture, and they have since functioned as carriers of Chinese philosophical, aesthetic and cultural values. However, most studies have been limited by available data [11–15].

Recently, scholars have emphasized the crucial role of big data from websites in harnessing abundant information resources [16]. The proliferation of the internet has facilitated rapid growth in user-generated content (UGC), especially with the widespread adoption of Web 2.0 technologies. This has enabled tourists to share their experiences and offer recommendations on hotels, restaurants, and attractions to others [17]. UGC can be regarded as spontaneous, insightful, and passionate feedback from consumers and is widely

E-mail address: yingshun@zju.edu.cn.

available, cost-effective, and easily accessible anytime and anywhere. The continuous stream of UGC over time generates significant volumes of data, providing practical input to complement traditional research methods in identifying critical issues.

This study seeks to systematically mine the significant and latent factors influencing hotel guests' aesthetic experience through UGC. Specifically, this study aims to reveal guests' aesthetic dimensions by word frequency, LDA topic modelling analysis and manual coding with the aid of computer language (Python) to analyse online textual data to reveal both theoretical and practical insights.

2. Literature review

2.1. Aesthetic experience

Aesthetics was first proposed by Plato (1951) [18] in his consideration of beauty. It was initially considered a branch of philosophy and then extended to psychology and marketing in the middle of the nineteenth century [19]. Aesthetics deals with the experience of objects that provide the consumer with an element of beauty or that convey significance and emotional satisfaction [19,20]. Aesthetic products have the following characteristics: (1) the aesthetic component is their primary purpose; (2) they can be considered beautiful or moving by a number of consumers; (3) they can provide intrinsic value; and (4) they exist in a highly segmented market [17]. Aesthetic consumption is a form of experiential consumption that simulates affective responses, a sense of identity and self-development [19].

"What do we find beautiful?" has been frequently asked since the time of Socrates. Individuals seek beautiful things to stimulate multisensory "live experiences" and have pleasant feelings [21]. Beauty can be objective, such as the universally acknowledged golden ratio. It can also be posited as subjective in nature due to its connection to individuals' social values, traditions, cultural backgrounds, political views and other value systems [22]. Lifestyle hotels demonstrate impressive artistic elements and local culture. As a form of high-end hotels, lifestyle hotels were designed to feature authentic culture, thought-provoking design and revolutionary architecture. They are recognized as a means to present national and local culture and as carriers of aesthetics, culture, art, and historical inheritance [23].

Previous studies investigating aesthetic qualities and guests' aesthetic experience can be classified into the three main groups of aesthetic experience dimensions, aesthetic perceptions and the influence of aesthetic experience on other behavioural variables. The first group explores the aesthetic experience dimensions of hotel guests. For instance, design, art concept, style, location, high levels of service, novelty, and brand identification are found to be the primary dimensions of lifestyle hotel guests' perceptions [23–26]. The second group is related to aesthetic perceptions; for example, higher aesthetic value in the lifestyle hotel context is considered to mean having superior physical facilities and a higher level of service and being more deserving of trust and confidence [27]. Aesthetic characteristics, such as traditional architecture, modern furniture, design-led elements, style, distinction and intimacy, are distinguished from operational characteristics, such as staff, amenities, food, and fitness centres [1].

The third group of research is related to the influence of aesthetic experience on other behavioural variables. For instance, aesthetics and design can play a critical role in influencing consumer behaviour during moments of consumption through emotional arousal [2,3]. Minimalist lifestyle appeals influence tourists' attitudes and booking intentions [11]. Another study revealed that the essence of a lifestyle experience is the sense of community and culture, which stimulate higher-order psychological social needs [12]. Interior colour affects customers' aesthetic perceptions, emotions, and behaviours in lifestyle hotels [28].

Although aesthetic experience has been widely studied in the hospitality field, very few studies have focused on the market segmentation of Chinese guests. Big data provides an excellent opportunity to do so, while previous studies have typically relied on traditional qualitative, quantitative or mixed methods (e.g., questionnaire surveys and focus groups) to identify the dimensions of experience and subsequently develop empirical measurement scales. These studies on experience are empirical and based on limited samples during a specific period. Moreover, initial measurement items and survey questions tend to be developed based on the knowledge of researchers in related industries (e.g., hospitality). As a result, inconsistent measurement items and questions are often created and used in prior studies [9,10,25].

2.2. Value of big data analysis

Compared with questionnaires, personal interviews and content analysis with limited samples, big data analysis has proven to offer newer insights into hotel guests' experience [16]. Word frequency analysis helps identify the most frequently used words or phrases in a dataset, revealing patterns and trends that might otherwise be overlooked. By counting the occurrences of each word or phrase, word frequency analysis can identify the most important or frequently mentioned topics, concepts, or keywords within the text. This allows researchers or analysts to quickly grasp the central ideas and themes of the document, saving time and effort. For instance, the main themes of luxury hotel service quality, including hotel-related attributes, room-related attributes, staff-related attributes, travel-related attributes, and possible outcomes, were identified by word frequency analysis [29].

Word frequency analysis can also provide valuable insights into consumer behaviour and preferences. By analysing the frequency of words or phrases related to products, services, or brands, marketers can identify what resonates with their target audience and adjust their strategies accordingly. For instance, the distribution of the theme attributes between Chinese and North American guests was identified and compared by word frequency analysis. The study also revealed that Chinese guests tend to mention both lifestyle- and social norm-related attributes and expect personalized service, while North American guests mainly describe lifestyle-related attributes and prefer standardized service [16].

Other data mining techniques, particularly latent Dirichlet allocation (LDA) topic modelling, have been extensively utilized to

extract meaningful topics and patterns from UGC. LDA, a probabilistic model, discerns latent topics within a document collection by analysing word distributions. It assumes that each document comprises a mixture of these latent topics, each characterized by a distribution of words. An increasing number of studies have investigated the application of LDA topic modelling to UGC analysis. One noteworthy study analysed Airbnb host reviews. Employing LDA, researchers identified key topics of hosts' perceptions of guests' behaviour, including careful use, smooth communication, showing fondness, going above and beyond, surface interaction, building and maintaining friendships and unique identity [30].

Another study identified the key dimensions of customer service voiced by hotel visitors. Through LDA analysis of textual data, the study revealed 19 controllable dimensions that are key for hotels to manage their interactions with visitors, including check-in and checkout, resort facilities, communication, homeliness, and bathrooms [31]. It also revealed differences according to demographic segment. Furthermore, LDA has been employed to detect patterns of hidden topics with the top high-probability keywords that are concerned with hotel guests and the trends of topics over time. The results revealed 14 themes related to hotel guests' experience, including breakfast, staff, reservation, service quality, street, room, bed, around the hotel, pool, check-in, atmosphere, transportation, bath, and staff attitudes [32].

The literature indicates that data mining methods such as word frequency analysis and LDA topic modelling are powerful tools for extracting meaningful information from UGC. They aid in understanding consumer behaviours, preferences, and opinions and can be applied to diverse applications, such as market research, product development, and trend analysis.

In summary, the goal of this study is to answer the following questions.

1. What is the word frequency in lifestyle hotel guests' textual reviews in this study?
2. What are the key dimensions of lifestyle hotel guests' aesthetic experience?
3. How valid are the new dimensions?
4. What is the framework for lifestyle hotel guests' aesthetic experience?

3. Methodology

3.1. Selecting travel websites

In this study, TripAdvisor was selected due to its massive number of reviews of Chinese lifestyle hotels. First, it contains information on lifestyle hotels in the best tourist destinations, such as Beijing, Shanghai, Chengdu, Guangzhou, Xi'an, Lijiang, Hangzhou, and

Table 1
Features of hotel guests.

Item		Frequency		Item	Frequency	
Travellers' origin				Trip type		
East China	Shanghai	1564	13.92 %	Travelled with friends	3034	27.00 %
	Jiangsu	630	5.61 %	Travelled with family	2320	20.64 %
	Zhejiang	2574	22.90 %	Travelled on business	2261	20.12 %
	Shandong	172	1.53 %	Travelled solo	2001	17.80 %
	Anhui	99	0.88 %	Travelled as a couple	1623	14.44 %
	Fujian	120	1.07 %	*Year of review*		
	Jiangxi	60	0.53 %	2007–2012	1036	9.22 %
North China	Beijing	1745	15.53 %	2013	268	2.38 %
	Tianjin	117	1.04 %	2014	81	0.72 %
	Hebei	155	1.38 %	2015	204	1.82 %
	Shanxi	61	0.54 %	2016	337	3.00 %
	Neimenggu	48	0.43 %	2017	584	5.20 %
Southwest China	Sichuan	820	7.30 %	2018	2030	18.06 %
	Chongqing	128	1.14 %	2019	3614	32.16 %
	Yunnan	831	7.39 %	2020	1615	14.37 %
	Guizhou	39	0.35 %	2021	934	8.31 %
	Xizang	2	0.02 %	2022	437	3.89 %
Southeast China	Guangdong	478	4.25 %	2023	99	0.88 %
	Guangxi	68	0.61 %	*Month of review*		
	Hainan	86	0.77 %	January	641	5.70 %
Northwest China	Shanxi	831	7.39 %	February	604	5.37 %
	Xinjiang	40	0.36 %	March	709	6.31 %
	Gansu	16	0.14 %	April	808	7.19 %
	Qinghai	11	0.10 %	May	910	8.10 %
	Ningxia	7	0.06 %	June	853	7.59 %
Central China	Hubei	103	0.92 %	July	1015	9.03 %
	Hunan	75	0.67 %	August	1167	10.38 %
	Henan	95	0.85 %	September	1025	9.12 %
Northeast China	Liaoning	132	1.17 %	October	1272	11.32 %
	Jilin	42	0.37 %	November	1232	10.96 %
	Heilongjiang	90	0.80 %	December	1003	8.92 %

Suzhou, as well as rich online reviews. In addition, the data generated by millions of users on the website cover various topics, providing a good source of data for tourism and hotel research [33]. Online reviews not only describe tourists' gaze on the physical attributes of the rooms, service, location, cleanliness, etc. [34] but also describe guests' emotional image of the hotel, such as pleasure, happiness, excitement and other emotions. Therefore, massive amounts of online data provide rich material for in-depth studies of the tourist gaze.

3.2. Data collection

The data were collected from TripAdvisor.com. First, eight cities (Beijing, Shanghai, Chengdu, Guangzhou, Xi'an, Lijiang, Hangzhou, Suzhou) were chosen based on the best domestic tourist destinations selected by TripAdvisor.com. These cities are located in different parts of China, ensuring the validity of the data. Second, luxury hotels that met the following criteria were needed to reveal lifestyle characteristics: (1) "provide highly personalized service that differentiates them from larger hotel brands" and are "both innovative and provide a more personal experience than so-called brand hotels" [25]; (2) incorporate art and design features [23]; and (3) provide a high level of service [35]. Ultimately, a total of 131 hotels were selected, and 11,239 online reviews (in Chinese) were obtained for data analysis (Table 1).

3.3. Data analysis

The data analysis in this study included four steps, as summarized in Fig. 1. In online review analysis, both qualitative and quantitative methods have been adopted for textual analysis to systematically uncover key attributes of lifestyle hotel guests' experiences [30,31]. First, a word frequency analysis was conducted. After removing words that did not provide meaningful information, such as "与" (and), "非常" (very), "这个" (this), "那个" (that), "我" (I) and "是" (is/am/are), the most frequently mentioned words were extracted and listed.

Second, we utilized a topic modelling approach in textual analysis to extract the most relevant themes. The latent Dirichlet allocation (LDA) method was employed for automatic coding due to its user-friendly configuration [36] and proven efficacy in numerous recent studies within the tourism domain [30,31]. LDA, a widely used unsupervised classification technique, identifies recurring patterns of words within a corpus by treating them as reflections of latent topics. In our study, guest reviews potentially encompass a blend of topics, with each topic characterized by a set of key terms [37]. We implemented the LDA model using Python and used perplexity and coherence as the metrics to determine the optimized number of topics in the LDA results. Perplexity is a metric that assesses the model's ability to effectively represent or replicate the observed data, and coherence quantifies the semantic similarity among highly rated words within a given topic [38]. The LDA process underwent multiple iterations, with manual scrutiny aimed at optimizing the number of topics by adhering to the standard of minimizing redundancy among topics while ensuring sufficient diversity and heterogeneity. Ultimately, we settled on ten topics for optimal interpretation (Fig. 2).

Finally, we conducted manual coding using content analysis on a subset of reviews to delve deeper into insights and uncover latent themes beyond those identified through automatic coding. Grounded theory was employed for manual coding, given its widespread use in exploratory studies to unearth underlying themes in qualitative data and to develop theories from the data [39]. First, we selected the top 900 reviews for manual coding, as longer reviews typically provide more detailed descriptions than shorter reviews. Second, employing open coding, we identified themes in the top 600 reviews related to the experiences of guests at lifestyle hotels. To ensure reliability, two researchers independently coded the reviews, subsequently comparing their results and resolving discrepancies through discussion until consensus was reached. To ascertain data saturation, an additional 300 reviews were coded, with no new themes emerging. Finally, through selective coding, we discovered that in addition to providing accommodations, lifestyle hotels could also serve as tourist destinations and event venues.

4. Findings

4.1. Word frequency analysis

Table 2 shows the 30 most frequent words (noun, verb and adjective) used by guests in their reviews of lifestyle hotels. The results
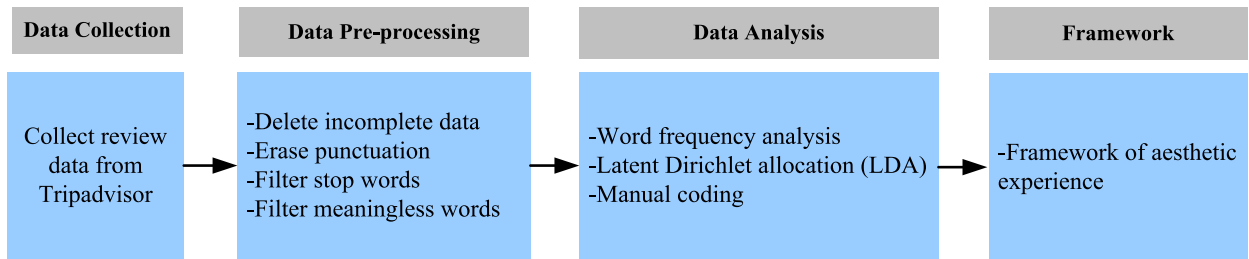

Data Collection	Data Pre-processing	Data Analysis	Framework
Collect review data from Tripadvisor	-Delete incomplete data -Erase punctuation -Filter stop words -Filter meaningless words	-Word frequency analysis -Latent Dirichlet allocation (LDA) -Manual coding	-Framework of aesthetic experience

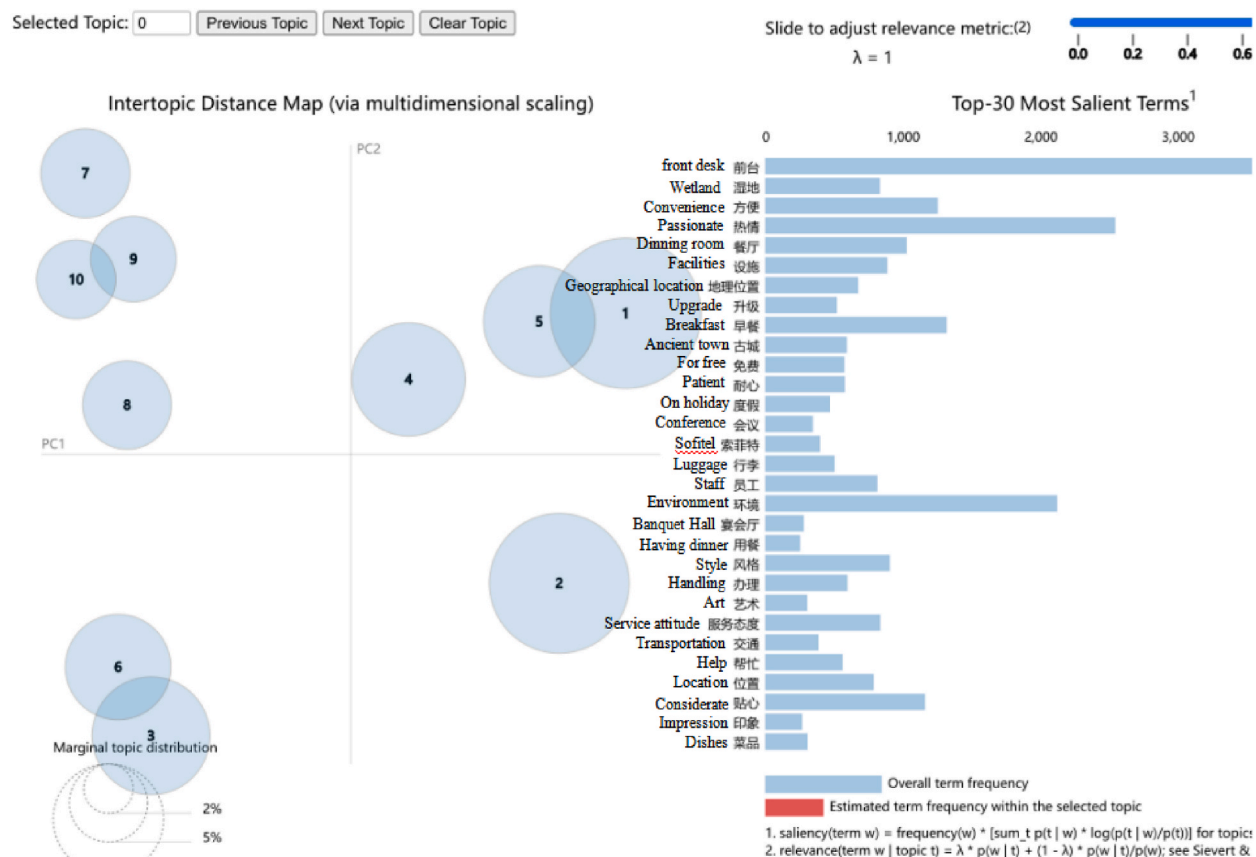**Fig. 1.** Workflow of data processing and analysis.

Fig. 2. Ten topics of guests' aesthetic experience identified by LDA topic modelling.

reveal the aesthetic experiences of lifestyle hotel guests. Among the top 30 nouns, "service" appeared 7809 times and was ranked first. Other service-related words, such as "front desk", "staff", "attitude", "manager", "concierge", "luggage", and "profession", appeared 7809, 4761, 4494, 1603, 710, 655, 581 and 503 times, respectively, suggesting that hotel service plays a dominant role in the hotel experience. The second most important word was "room", which appeared 5438 times and ranked second, suggesting that hotel guests' place an emphasis on room experience. Other words, including "environment", "location", "breakfast", "convenience", "restaurant", "design", "style", "facilities", "decoration", and "transportation", of the top 30 nouns also reflect the focus of hotel guests' experience. The top 30 verbs and adjectives were consistent with the nouns listed in Table 2.

4.2. Topic modelling

Automatic coding with LDA identified ten topics that appeared in hotel guests' reviews. Topics were labelled based on the top 30 most relevant words for each topic. Table 3 presents all the topics and their representative key words, which are ranked by the proportion of each topic. Among the ten topics, *service attitude and interaction* had the largest proportion, representing 18.6 % of the total reviews. Words such as "staff", "concierge", "service attitude", "help", and "thoughtful" were found in this category. This finding aligned with the word frequency analysis showing that "service" was the most frequently mentioned word. The second topic was *hotel facilities and events,* representing 16 % of the total reviews and containing the words "meeting", "banquet hall", "hold/organize", "activity/event", "venue/conference hall", "wedding", "exhibition", etc.

Surroundings, shopping and dining (11.4 %) was the third most common topic, in which "Guanqian Street", "Lingyin Temple", "roast duck", "go shopping", etc. were mentioned by guests. *Service offerings, service level and room preference* (10.5 %) referred to the professionalism of service and guests' room preferences with related words such as "front desk", "reception", "upgrade", "river view", "night view", "landmark view", and "bright". *Entertainment facilities, room amenities and design* (10.2 %) were also important for guests, including words such as "pool", "gym", "swimming", "bathtub", "terrace", "bathroom", "sofa", "luxury", "artwork", and "design". *Relaxation lifestyle* (9.1 %) referred to guests' seeking of spiritual satisfaction, represented by the keywords "afternoon tea", "rowing", "boating", "snack/dim sum", "red wine", etc.

Surroundings and location (6.5 %) reflected hotels' geographical position, including the keywords "environment", "geographic location", "ancient city", "surroundings", "scenery", etc. *Travel-related elements* (6.4 %) reflected the social media preferences of

Table 2
Top 30 nouns, verbs and adjectives appearing in the reviews.

No	Noun	Freq.	Verb	Freq.	Adjective	Freq.
1	service	7809	check in	4951	passionate	2883
2	room	5438	like	1949	comfortable	2002
3	front desk	4761	thank	1768	thoughtful	1365
4	staff	4494	recommend	1691	great	1109
5	experience	2473	dining	1274	considerate	1078
6	environment	2438	introduce	1250	satisfied	1070
7	location	1781	help	1127	excellent	946
8	attitude	1603	travel	964	clean	823
9	breakfast	1591	will revisit	759	free	708
10	convenience	1490	handle	751	happy	691
11	restaurant	1232	arrange	647	worthwhile	690
12	design	1226	upgrade	621	delicious	663
13	style	1079	see	591	patient	656
14	facilities	1056	hope	580	quiet	651
15	lobby	821	offer	554	suitable	573
16	feature	753	play	892	spacious	560
17	manager	710	on vacation	542	friendly	459
18	feeling	701	expect	540	perfect	458
19	ancient city	663	feel	501	praise	430
20	concierge	655	reception	475	in place	428
21	guest room	653	check out	396	attentive	418
22	decoration	650	travel	384	rich	405
23	guest	596	on business	315	proactive	386
24	luggage	581	decorate	290	cozy	364
25	overall	556	welcome	269	tidy	327
26	scenery	549	locate	268	exquisite	323
27	view	510	discover	267	surprise	322
28	profession	503	solve	239	pleasant	315
29	taste	485	take photos	231	well-equipped	303
30	transportation	453	go out	231	beautiful surroundings	286

Table 3
Topic summary based on LDA analysis.

No	Topic label	Keywords	Proportion
1	service attitude and interaction	staff, concierge, service attitude, help, thoughtful, enthusiastic, attentive, considerate, patient, professional, friendly, polite, proactive, warm-hearted, careful, kind, smile, solve, ask	18.60 %
2	hotel facilities and events	meeting, banquet hall, hold/organize, activity/event, venue/conference hall, wedding, exhibition, meeting room/conference room	16 %
3	surroundings, shopping and dining	Guanqian Street, Lingyin Temple, business district, downtown area, environment, quiet, peaceful, refreshing, tranquil, serene, beautiful, shopping, dining, restaurant, roast duck, delicacies, meal delivery, a cup of, preference, bar, go shopping	11.40 %
4	service offerings, service level and room preference	front desk, reception, upgrade, handle, free, checkout, lobby, tea, gift, biscuit, top-notch, up to standard, responsive to requests, river view, night view, landmark view, bright, scenery outside window, rooftop	10.50 %
5	entertainment facilities, room amenities and design	pool, gym, swimming, bathtub, terrace, bathroom, sofa, lighting, bed linen, bedside, soundproofing, elevator, indoor, decoration, art, style, luxury, space, spacious, layout, artwork, hotel design, simplicity, modern, characteristic, theme, ornament, taste	10.20 %
6	relaxation lifestyle	afternoon tea, rowing, boating, snack/dim sum, dining room, cake, flavour, tasty, fruit, red wine, open/turn on	9.10 %
7	surroundings and location	environment, geographic location, ancient city, surroundings, scenery, air, ancient path, city centre, alley, park area, ancient town, bustling	6.50 %
8	travel-related elements	internet celebrity photo spot, internet celebrity, cruise, oasis, city, garden, scenery, tourist attraction	6.40 %
9	hotel restaurant	restaurant, breakfast, delicious, dishes, taste, Chinese restaurant, coffee, Chinese-style, Western restaurant, food, afternoon tea, dinner, Sanlitun (a place), buffet, dining, set menu, gourmet food, flavour, fruit, Italian, cafe, variety, garden, coffee shop, tasting, Chinese cuisine, menu	6 %
10	natural environment	wetland, nature, Jiangnan (a region in China that generally refers to south of the Yangtze River), small bridges and running water, weather, ecological environment, Jiangnan water town (a town with many waterways and canals typical of the Jiangnan region), beautiful environment, Zhuozheng Garden (a famous garden in Suzhou, China), rainy day	5.10 %

lifestyle hotel guests, including words such as "internet celebrity photo spot", "internet celebrity", "cruise", "oasis", and "tourist attraction". *Hotel restaurant* (6 %) also played an important role in guests' experience, including keywords such as "breakfast", "delicious", "dishes", "taste", "Chinese restaurant", "coffee", "Chinese-style", and "Western restaurant". *Natural environment* (5.1 %) was the last topic identified and comprised the keywords "wetland", "nature", "Jiangnan" (a region in China that generally refers to the

southern Yangtze River), "small bridges and running water", etc.

4.3. Manual coding

Content analysis with open coding resulted in 9 themes and 24 subthemes. Table 4 presents all the themes and subthemes and one direct quote from the reviews for each subtheme. The themes identified by manual coding cannot be ranked by their proportions because they came from a sample of the dataset, but they were consistent with the LDA results.

Service referred to the range of services provided by a hotel to its guests and covered dimensions of the service attitude and service items. Service attitude referred to the manner and approach with which service providers engage with guests, and it played a key role in guests' experience. One reviewer commented, "The front desk service attitude is excellent, completely satisfying our needs …" Service items included accommodations, meal services, front desk assistance, cleaning services, maintenance, etc. A number of high-end hotels also provided event services; one reviewer commented, "The banquet manager received us throughout the conference, helped guide guests into the breakout rooms, arranged refreshments in all the halls …"

Room mainly covered dimensions of amenities and decoration. Room amenities referred to the facilities and services provided in a hotel room for guests' comfort and convenience, including beds and bedding, bathroom facilities, televisions, internet access, climate control, refreshments, etc. Room decoration referred to the interior design and styling of hotel rooms, including the selection of colours, fabrics, furniture, lighting, and other elements that contributed to the overall aesthetics and ambiance of the room. One reviewer commented, "the room decoration is mainly in plain colours, simple and understated, with new Chinese-style furniture."

Location covered dimensions of geographical location and culturally inspired location. Geographical location referred to the proximity to various landmarks, transportation hubs, and other key features of the surrounding area, such as "at the foot of the mountain". According to one reviewer, culturally inspired location meant proximity to cultural destinations: "the entrance of the hotel is not only stylish but also a real monument, which used to be the seat of the Qing Dynasty Brush and Post Office". *Environment* was categorized into the surrounding area and the environment inside the hotel. Chinese guests preferred a hotel that was surrounded by

Table 4
Themes and subthemes of guests' aesthetic experience according to manual coding.

Theme	Subthemes	Review quotes
service	service attitude	The front desk service attitude is excellent, completely satisfying our needs, and they even kindly recommended nearby restaurants and helped us reserve seats.
	service items	The banquet manager received us throughout the conference, helped guide guests into the breakout rooms, arranged refreshments in all the halls, and assisted in setting up the signing table during the meeting, which concluded successfully.
room	amenities	The bathroom has two separate sets of wardrobes, each equipped with a sewing kit and a yoga mat.
	decoration	The room decoration is mainly in plain colours, simple and understated, with new Chinese-style furniture.
location	geographical location	It is at the foot of the mountain, with wide open tea gardens, a small river and a large and very old ancient banyan tree in front of the hotel.
	culturally inspired location	The entrance of the hotel is not only stylish but also a real monument, which used to be the seat of the Qing Dynasty Brush and Post Office.
environment	surrounding environment	The inn is surrounded by gurgling water, greenery, and pictures of small bridges and flowing water are constantly presented.
	environment inside hotel	The hotel environment is excellent. The entrance is small, but once inside, it is incredibly beautiful with a strong sense of design and a distinct artistic atmosphere.
design	entrance design	From the outside, it looks like an old hotel; when you walk in, you find that there is hidden wonders and it is very spacious!
	atmosphere design	… we felt that the courtyard of blue bricks and black tiles was warm and quiet, and the plants and furnishings in the courtyard gave us a warm feeling.
	architecture design	The inn is rebuilt from a century-old ancient dwelling. The entrance is a garden rockery. Walking in, the Soviet-style brick-carved gatehouse is impressive. This is a scaled-down version of a Chinese garden-style building.
	Fengshui design	The windows are also big, facing south, and the house is very bright.
	artwork	The whole hotel is full of an artistic atmosphere, the lobby has an artistic sense, and there are many styles of artwork on the second floor, like a museum.
	art exhibition	Surprisingly, there's a private cinema and an art gallery as well. Beyond imagination!
	niche elements	Perrin & Rowe for the bathroom is the top luxury niche bathroom brand in the UK.
	high-end elements	I am very impressed with the design of the walls. It should be based on the elements of traditional Chinese medicine rooms. The overall design is also very standard, not inferior to world-class design hotels.
	eco-friendly elements	Because staying in the hotel advocates environmental protection, the hotel is built in an old-fashioned garden room, and the investment in facilities is relatively high.
food	food variety	On the other hand, the delicacy is reflected in the breakfast. The buffet-style breakfast allows guests to choose their dishes, featuring a very healthy breakfast menu.
	local flavour	The pure taste of Pu'er and the skilful tea making add a touch of bright colour to the lazy afternoon.
convenience	transportation	The hotel is located in the downtown area, and the surrounding transportation is also very convenient.
	shopping and dining	The location is excellent, with plenty of options for shopping and dining.
hotel facilities	entertainment facilities	Although the swimming pool is small, the water temperature is relatively high, which is suitable for children to swim.
	event facilities	The meeting rooms are available in all sizes, with reasonable prices.
entertainment	take photos	I particularly like the arrangement of the brush pen holder and Go chess set in the room, which are perfect for taking photos.
	travel	After more than an hour of boating, I was able to calm down and appreciate the beauty of nature.

"gurgling water, greenery, and pictures of small bridges". Another commenter wrote, "the entrance is small, but once inside, it is incredibly beautiful with a strong sense of design and a distinct artistic atmosphere".

Design was especially critical for lifestyle hotels and included entrance, atmosphere, architecture and Fengshui design; artwork; art exhibition; and niche, high-end and eco-friendly elements. For instance, guests noted, "from the outside, it looks like an old hotel; when you walk in, you find that there are hidden wonders and it is very spacious!" and, "Surprisingly, there's a private cinema and an art gallery as well. Beyond imagination!" *Food, convenience, hotel facilities* and *entertainment* were also important to guests' experience.

4.4. A framework for lifestyle hotel guests' aesthetic experience

This section synthesizes the coding results of the two approaches and outlines how lifestyle hotels can expand from mere accommodations to tourist destinations and event-holding organizations (Fig. 3).

4.4.1. High-end lodging

Sections 4.1–4.3 showed that the accommodation functionality of lifestyle hotels plays a key role in guests' experience. Four themes from manual coding (service, room, food, convenience) can be grouped into this category. Reviewers commented, "the front desk service attitude is excellent, completely satisfying our needs, and they even kindly recommended nearby restaurants and helped us reserve seats"; "The bathroom has two separate sets of wardrobes, each equipped with a sewing kit and a yoga mat"; "On the other hand, the delicacy is reflected in the breakfast. The buffet-style breakfast allows guests to choose their dishes, featuring a very healthy breakfast menu"; and "The hotel is located in the downtown area, and the surrounding transportation is also very convenient."

The findings from automatic coding also showed this accommodation functionality. *Service attitude and interaction* (18 %), *service offerings, service level and room preference* (10.5 %), *surroundings and location* (6.5 %) and *hotel restaurant* (6 %), which can all indicate the accommodation functionality of lifestyle hotels, accounted for 41 % of all the reviews. The results indicated that service-related performance, room-related offerings, hotel location and food provision are critical features of lifestyle hotel guests' experience.

4.4.2. Tourism destinations

As shown in the coding results, lifestyle hotels have evolved beyond mere accommodation facilities to become immersive destinations for travellers seeking unique experiences. Four themes from manual coding can be classified in this category: location, environment, design and entertainment. Reviewers commented, "It is at the foot of the mountain, with wide open tea gardens, a small river and a large and very old ancient banyan tree in front of the hotel"; "The inn is rebuilt from a century-old ancient dwelling. The entrance is a garden rockery. Walking in the Soviet-style brick-carved gatehouse is impressive. This is a scaled-down version of a Chinese garden-style building"; and "The whole hotel is full of artistic atmosphere, the lobby has an artistic sense, and there are many styles of artwork on the second floor, like a museum."

The findings from automatic coding also showed this transition. *Surroundings, shopping and dining* (11.4 %), *entertainment facilities, room amenities and design* (10.2 %), *relaxation lifestyle* (9.1 %), *travel-related elements* (6.4 %) and *natural environment* (5.1 %), which can all reflect the transition from simple accommodations to a tourism destination, accounted for 42.2 % of the review content. These
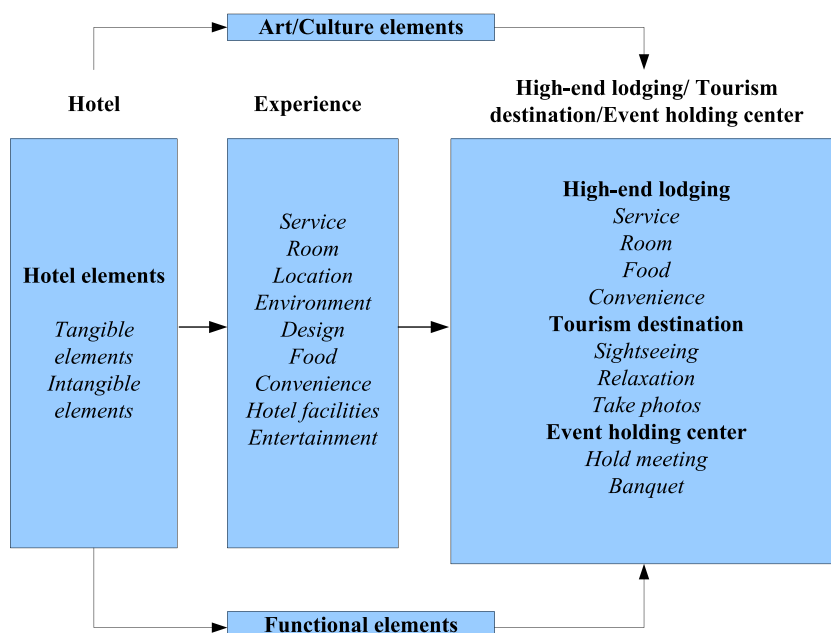

Fig. 3. A framework for lifestyle hotel tourists' aesthetic experience.

results suggest that by incorporating elements of local culture, cuisine, art, and recreation, lifestyle hotels can enhance their appeal as holistic travel experiences, attracting visitors for not only for lodging but also leisure and exploration.

4.4.3. Event centres

The coding results revealed that by leveraging their unique ambiance, design aesthetics, and lifestyle-oriented offerings, lifestyle hotels can create compelling event spaces that cater to the evolving needs and preferences of modern event organizers and couples. For instance, the subtheme "event facilities" of the theme "hotel facilities" from manual coding can be classified in this category. Reviewers commented,

"The training session held by the Agricultural Development Bank of China at the Arc de Triomphe was a complete success. I would like to express my special gratitude to the service provided by Du Jiao, Liu Yifang, and Qiu Na. We will definitely choose to hold our next meeting here. We frequently organize events and business banquets at this hotel, and the service staff is always friendly and attentive. The hotel is also very luxurious."

"The venue is excellent and very suitable for a business meeting atmosphere. The service was also very good, with CC being attentive throughout the stay. The guest rooms are also very nice, clean, and I love the style here. The Hong Kong-style decoration is beautiful and is well liked by our clients."

The findings from automatic coding also showed this transition. *Hotel facilities and events* (16 %) reflected the event-holding organization functions of lifestyle hotels and accounted for 16 % of the total reviews. These results suggest that lifestyle hotels can establish themselves as premier destinations for conferences, meetings, and weddings, driving revenue growth and brand differentiation in an increasingly competitive market landscape.

5. Discussion

5.1. Theoretical implications

Theoretically, the study contributes to the literature in two ways. First, it extends the existing knowledge of aesthetic experience and consumer behaviour in hospitality. In line with previous studies [40–47], this study reveals that *service, room, environment, location,* etc. are critical to hotel guests' experience, as well as ancient city, take photos, beautiful surroundings, etc. The new dimensions discovered are mostly related to the aesthetic experience of lifestyle hotels. This study suggests that lifestyle hotel offerings are a reflection of culture, which is consistent with Zheng et al.'s (2022) findings [48]. This study also illuminates Chinese guests' aesthetic experience through manual coding and explores the cultural implications of that experience. It shows how Chinese guests orient themselves in an artistic and cultural environment. They tend to seek lifestyle elements to fulfil their spiritual needs. For instance, Chinese tourists oriented themselves to culturally inspired locations, beautiful natural environments, unique designs, artistic elements and local features.

Second, a framework for lifestyle hotel guests' aesthetic experience is proposed. This study offers a new perspective for investigating the emergent market segment of independent travellers in China. It suggests that lifestyle hotel guests not only seek lodging but are also inclined to enjoy leisure, relaxation and event services. By incorporating elements of local culture, cuisine, art, and recreation, lifestyle hotels can transform from mere accommodations to tourism destinations and event centres. This result is different from Cilkin and Cizel's (2022) findings on romantic experiences, including curiosity, difference and interest, a sense of awareness, authenticity, etc. [49]. Thus, Chinese experience patterns are distinct from Western experience patterns, which have been widely discussed in previous literature.

Finally, this study identifies the main concepts related to aesthetics from the LDA. Unlike traditional manual coding, LDA autonomously analyses clustering and extracts potential topics from sizable text data. In a previous hospitality study, Kirillova et al. (2014) adopted two-stage semistructured interview data from a theoretical sample of 57 individuals to develop the aesthetic dimensions of scale, time, condition, sound, balance, diversity, novelty, shape, and uniqueness of tourism destinations in the Western context [22]. However, the LDA analysis adopted in this study examined 11,239 online reviews (in Chinese) in greater breadth and depth, yielding more objective, comprehensive, and precise conclusions.

5.2. Pragmatic implications

The findings of this study also have pragmatic implications for the hospitality industry. Lifestyle hotel guests not only look for lodging experiences [50] but also seek artistic and cultural experiences and event centres. This discovery lays the groundwork for a better understanding of lifestyle hotel experience and can accordingly facilitate effective marketing strategies, including marketing development, hotel product development, and product design.

The findings indicate that in addition to service, room, food and convenience, lifestyle hotel experience involves appreciating arts and culture. When arriving at a lifestyle hotel, Chinese guests tend to first obtain an overall impression and then pay attention to details and unique elements, and they experience space and time perceptions based on these findings. Chinese guests have their own way of experiencing space and time, such as narrow spaces with hidden spacious wonders, hustling and bustling city life outside but seclusion inside the hotel, a focus on southern exposure, etc. Thus, hotel managers need to understand guests' preferences when developing and designing products. For example, hotel marketers should concentrate on traditional cultural roots (Confucianism, Taoism and Buddhism) to develop harmony with the natural atmosphere, such as gurgling water, greenery, and small bridges around hotels; a Zen atmosphere outside and inside hotels; royal garden-style or Chinese vernacular dwelling-style architecture; local-style decoration; and

rooms facing south.

This framework offers a better understanding of hotel guests' aesthetic experience. According to the results, lifestyle hotels are gradually coming to be considered as tourism destinations and event centres. Thus, hotel managers should understand guests' preferences in promoting, developing and designing hotel products. Since hotel marketing strategies have long been confined to the hospitality domain, the framework for aesthetic experience identified in the study offers a new perspective for hoteliers to use corresponding strategies to cater to the emergent market segment.

Overall, lifestyle hotels embrace the concept of "bleisure" travel—blending business and leisure by offering high-end lodging, flexible tourism destination elements, and event services that cater to the needs of today's independent guests. By embracing innovation, sustainability, and guest-centrality, lifestyle hotels are poised to continue leading the way in shaping the future of accommodation experiences and setting new standards of excellence in the hospitality industry.

6. Conclusion

This study examined lifestyle hotel guests' aesthetic experience. Both big data analysis and qualitative content analysis methods were applied for textual analysis to extract the key features for lifestyle hotel guests. A framework was constructed to represent the experience: lifestyle hotels are expanding from mere accommodations to providing high-quality lodging and serving as tourist destinations and event venues. Each function includes several behavioural components that lead to good guest experience and satisfaction. Based on proportions, high-end lodging (41 %) is the fundamental and predominant factor in good experiences in lifestyle hotels, stressed by *service attitude and interaction* (18 %), *service offerings, service level and room preference* (10.5 %), *surroundings and location* (6.5 %) and *hotel restaurant* (6 %). These dimensions are easily assessed and highly valued by guests. Tourism destination elements (42.2 %), covering *surroundings, shopping and dining* (11.4 %), *entertainment facilities, room amenities and design* (10.2 %), *relaxation lifestyle* (9.1 %), *travel-related elements* (6.4 %) and *natural environment* (5.1 %), reflect guests' taste for the local culture, cuisine, art, and recreation of lifestyle hotels. Finally, event centres (16 %) (*hotel facilities and events)* reflect the event organization functions of a lifestyle hotel.

This study has several limitations. First, the presented results are confined to Chinese lifestyle hotels; it is possible that certain dimensions were ignored in this research but may still be valuable for hotel guests' aesthetic experience. Future research should cover other types of hotels to gain a more comprehensive understanding of hotel guests' aesthetic experience. Second, although the text mining methodology was effective in revealing hotel guests' aesthetic experience model, empirical studies are also suggested to modify the model and further explore guests' aesthetic experience. Future research should collect onsite data from lifestyle hotels. Finally, this study is confined to hotel guests' aesthetic experience, and future research should link this to variables such as hotel guests' satisfaction, decision-making, revisit intention, and motivation.

Data availability statement

Data associated with our study hasn't been deposited into a publicly available repository. And data will be made available on request.

Ethics statement

Informed consent was not required for this study because it was completed independently by a single author. Review and/or approval by an ethics committee was not needed for this study, because our study belongs to the field of social sciences, and it does not involve experiments on human beings.

CRediT authorship contribution statement

Shun Ying: Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Software, Resources,

Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References

[1] W.M. Lim, M. Endean, Elucidating the aesthetic and operational characteristics of UK boutique hotels, Int. J. Contemp. Hospit. Manag. 21 (1) (2009) 38–51.
[2] J. Baek, C.M. Ok, The power of design: how does design affect consumers' online hotel booking? Int. J. Hospit. Manag. 65 (2017) 1–10.
[3] D. Alfakhri, D. Harness, J. Nicholson, T. Harness, The role of aesthetics and design in hotelscape: a phenomenological investigation of cosmopolitan consumers, J. Bus. Res. 85 (2018) 523–531.
[4] L. Nanu, I. Rahman, F. Ali, D.S. Martin, Enhancing the hospitality experience: a systematic review of 22 years of physical environment research, Int. J. Hospit. Manag. 119 (2024) 103692.
[5] J.S. Cheng, T.W. Tang, H.Y. Shih, T.C. Wang, Designing lifestyle hotels, Int. J. Hospit. Manag. 58 (2016) 95–106.
[6] Y. Li, H. Fu, S.S. Huang, Does conspicuous decoration style influence customer's intention to purchase? The moderating effect of CSR practices, Int. J. Hospit. Manag. 51 (2015) 19–29.
[7] Y. Fan, S.M. Isa, S. Yang, J. Wen, Effects of the guest experience, well-being, and eWOM intention for resort hotels: a positive psychology perspective, J. Hospit. Tourism Manag. 56 (2023) 197–206.
[8] Y.-C. Huang, C.-C.B. Chen, M.J. Gao, Customer experience, well-being, and loyalty in the spa hotel context: integrating the top-down & bottom-up theories of well-being, J. Trav. Tourism Market. 36 (5) (2019) 595–611.
[9] J. Ahn, K.J. Back, C. Boger, Effects of integrated resort experience on customers' hedonic and eudaimonic well-being, J. Hospit. Tourism Res. 43 (8) (2019) 1225–1255.
[10] S. Vada, C. Prentice, N. Scott, A. Hsiao, Positive psychology and tourist well-being: a systematic literature review, Tourism Manag. Perspect. 33 (2020). Article, 100631.
[11] S. Chen, H. Wei, Minimalism in capsule hotels: enhancing tourist responses by using minimalistic lifestyle appeals congruent with brand personality, Tourism Manag. 93 (2022) 104579.
[12] Y. Li, J. Kandampully, S.Q. Liu, M. Bujisic, Towards a lifestyle experience: a phenomenological conceptualization and scale development in the hotel context, Tourism Manag. 87 (2021) 104388.
[13] W. Wang, S. Ying, C. Mejia, Y. Wang, X. Qi, J.H. Chan, Independent travelers' niche hotel booking motivations: the emergence of a hybrid cultural society, Int. J. Hospit. Manag. 89 (2020) 102573.
[14] T.S. Wong, J.K.L. Chan, Experience attributes and service quality dimensions of peer-to-peer accommodation in Malaysia, Heliyon 9 (7) (2023) e10275.
[15] X. Li, W. Cui, W.M. Chee, Investigating tourism experiences and attention allocation of outbound tourists through the lens of the two-factor theory: a grounded theory analysis of Chinese tourists' travelogues in Malaysia, Heliyon 9 (7) (2023) e02975.
[16] S. Ying, J.H. Chan, X. Qi, Why are Chinese and North American guests satisfied or dissatisfied with hotels? An application of big data analysis, Int. J. Contemp. Hospit. Manag. 32 (10) (2020) 3249–3269.
[17] M.-Y. Wu, P. Pearce, W. Dong, How satisfying are Shanghai's superior hotels? the views of international tourists, Int. J. Contemp. Hospit. Manag. 29 (4) (2017) 1096–1115.
[18] Plato. [n.d.], Symposium. Translated by W. Hamilton, Penguin, London, 1951.
[19] C. Charters, Aesthetic products and aesthetic consumption: a review. Consumption, Markets, and Culture 9 (3) (2006) 235–255.
[20] E. Hirschman, M. Holbrook, Hedonic consumption: emerging concepts, methods and propositions, J. Market. (1982) 92–101.
[21] G. Baldessarelli, I. Stigliani, K.D. Elsbach, The aesthetic dimension of organizing: a review and research agenda, Acad. Manag. Ann. 16 (1) (2022) 217–257, https://doi.org/10.5465/annals.2020.0198.
[22] K. Kirillova, X. Fu, X. Lehto, L. Cai, What makes a destination beautiful? Dimensions of tourist aesthetic judgment, Tourism Manag. 42 (2014) 282–293.
[23] J.S. Cheng, T.W. Tang, H.Y. Shih, T.C. Wang, Designing lifestyle hotels, Int. J. Hospit. Manag. 58 (2016) 95–106.
[24] Y. Han, H. Lee, Lifestyle experiences: exploring key attributes of lifestyle hotels using instagram user-created contents in South Korea, Sustainability 13 (5) (2021) 2591.
[25] D.L. Jones, J. Day, D. Quadri-Felitti, Emerging definitions of boutique and lifestyle hotels: a Delphi study, J. Trav. Tourism Market. 30 (7) (2013) 715–731.
[26] C.R. Liu, T.H. Chiu, Y.C. Wang, W.S. Huang, Generation Y's revisit intention and price premium for lifestyle hotels: brand love as the mediator, Int. J. Hospit. Tourism Adm. 21 (3) (2020) 242–264.
[27] K. Kirillova, J. Chan, "What is beautiful we book": hotel visual appeal and expected service quality, Int. J. Contemp. Hospit. Manag. 30 (3) (2018) 1788–1807.
[28] D. Kim, H. Hyun, J. Park, The effect of interior color on customers' aesthetic perception, emotion, and behavior in the luxury service, J. Retailing Consum. Serv. 57 (2020) 102252.
[29] P. Padma, J. Ahn, Guest satisfaction & dissatisfaction in luxury hotels: an application of big data, Int. J. Hospit. Manag. 84 (2020) 102318.
[30] L. Xue, X.Y. Leung, S.D. Ma, What makes a good "guest": evidence from Airbnb hosts' reviews, Ann. Tourism Res. 95 (2022) 103426.
[31] Y. Guo, S.J. Barnes, Q. Jia, Mining meaning from online ratings and reviews: tourist satisfaction analysis using latent dirichlet allocation, Tourism Manag. 59 (2017) 467–483.
[32] V.H. Nguyen, T. Ho, Analysing online customer experience in hotel sector using dynamic topic modelling and net promoter score, Journal of Hospitality and Tourism Technology 14 (2) (2023) 258–277.
[33] L. Zhou, S. Ye, P.L. Pearce, M.Y. Wu, Refreshing hotel satisfaction studies by reconfiguring customer review data, Int. J. Hospit. Manag. 38 (2014) 1–10.
[34] E.M. Ineson, D. Comic, L. Kalmic, Towards a hierarchy of hotel guests' in-room needs, Int. J. Contemp. Hospit. Manag. 31 (12) (2019) 4401–4418.
[35] J. Baek, Y. Choe, C.M. Ok, Determinants of hotel guests' service experiences: an examination of differences between lifestyle and traditional hotels, J. Hospit. Market. Manag. 29 (1) (2020) 88–105.
[36] D.M. Blei, A.Y. Ng, M.I. Jordan, Latent dirichlet allocation, J. Mach. Learn. Res. 3 (2003) 993–1022.
[37] D. Newman, P. Smyth, M. Welling, A. Asuncion, Distributed inference for latent dirichlet allocation, Adv. Neural Inf. Process. Syst. 20 (2007) 1081–1088.
[38] R. Řehůřek, Fast and Faster: A Comparison of Two Streamed Matrix Decomposition Algorithms. NIPS 2010 Workshop on Low-Rank Methods for Large-Scale Machine Learning, 2010.
[39] G. Jennings, O. Junek, Grounded theory: innovative methodology or a critical turning from hegemonic methodological praxis in tourism studies, The critical turn in tourism studies: Innovative research methodologies (2007) 197–210.
[40] V. Apaolaza, P. Hartmann, C. Fernández-Robin, D. Yáñez, Natural plants in hospitality servicescapes: the role of perceived aesthetic value, Int. J. Contemp. Hosp. Manag. 32 (2) (2020) 665–682.
[41] R.F. Chao, Y. Fu, C.H. Liang, Influence of servicescape stimuli on word-of-mouth intentions: an integrated model to indigenous restaurants, Int. J. Hosp. Manag. 96 (2021) 102978.
[42] Y.C. Chen, M.C. Li, S.D. Weng, Y.C. Wang, A descriptive survey of atmospheric music broadcasting in hot spring hotels and its further marketing strategy, Sage Open 13 (1) (2023) 21582440221147145.
[43] J.S. Cheng, T.W. Tang, H.Y. Shih, T.C. Wang, Designing lifestyle hotels, Int. J. Hosp. Manag. 58 (2016) 95–106.

[44] R.F. Guzzo, C. Suess, T.S. Legendre, Biophilic design for urban hotels–prospective hospitality employees' perspectives, Int. J. Contemp. Hosp. Manag. 34 (8) (2022) 2914–2933.

[45] H. Han, J. Yu, S.S. Hyun, Effects of nature-based solutions (NBS) on eco-friendly hotel guests' mental health perceptions, satisfaction, switching barriers, and revisit intentions. J. Hosp. Mark, Manag. 29 (5) (2020) 592–611.

[46] M. Sohaib, Y. Wang, K. Iqbal, H. Han, Nature-based solutions, mental health, well-being, price fairness, attitude, loyalty, and evangelism for green brands in the hotel context, Int. J. Hosp. Manag. 101 (2022) 103126.

[47] J. Wang, V. Butkouskaya, Sustainable marketing activities, event image, perceived value and tourists' behavioral intentions in the sports tourism, Journal of Economics, Finance and Administrative Science 28 (55) (2023) 60–78, https://doi.org/10.1108/JEFAS-09-2022-0219.

[48] Y. Zheng, W. Wei, L. Zhang, T. Ying, Tourist gaze at Chinese classical gardens: the embodiment of aesthetics (yijing) in tourism, J. Hospit. Tourism Res. (2022) 10963480221085958.

[49] R.E. Cilkin, B. Cizel, Tourist gazes through photographs, J. Vacat. Mark. 28 (2) (2022) 188–210.

[50] H. Wu, W. Wang, Y. Tao, M. Shao, C. Yu, Understand the Chinese Z generation consumers' green hotel visit intention: an extended theory of planned behavior model, Heliyon 10 (3) (2024) e25103.