Enhancing 3-Star Hotels to Wellness Hotels through User-Centered and UX/UI Design: A Case Study in Hua Hin District, Prachuap Khiri Khan

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Article info

Abstract

This research investigates the transformation of 3-star hotels into wellness hotels through user-centered and UX/UI design approaches in Hua Hin District, Prachuap Khiri Khan. The study employed a mixed-methods approach, combining qualitative interviews with three key informants and a quantitative survey of 50 tourists. The qualitative component provided in-depth insights into wellness tourism trends and challenges, while the quantitative survey assessed tourists' preferences and expectations regarding wellness amenities and services. Key qualitative findings revealed that successful wellness hotel transformations require a comprehensive approach integrating physical design, service offerings, and digital experiences. Quantitative results showed that tourists prioritize hydrotherapy (16.7%), health exercise (16.0%), and massage (12.8%) as top wellness activities. For dining, 30.9% emphasized healthy food menus, and 20.0% prioritized healthy beverages. Based on these insights, prototypes for websites, menus, and signage were developed and evaluated by 50 hotel entrepreneurs and related agencies. The overall satisfaction with the prototypes was high (mean = 4.24, SD = 0.267). This research contributes to understanding that user-centered and UX/UI design can effectively transform 3-star hotels into wellness-oriented establishments. The high satisfaction ratings suggest that the developed prototypes have significant potential for enhancing user experiences and hotel competitiveness in the wellness tourism market. These findings provide design strategies, services, and product information for 3-star hotels seeking to enhance their offerings and competitiveness in the evolving wellness tourism market, potentially contributing to the broader development of wellness tourism in Thailand.

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Introduction

The global tourism industry has witnessed a significant shift towards health and wellness-oriented travel experiences in recent years. Wellness tourism, defined as travel associated with the pursuit of maintaining or enhancing one's personal well-being (Global Wellness Institute, 2023), has emerged as a rapidly growing sector within the broader tourism industry. This trend has been further accelerated by the global COVID-19 pandemic, which has heightened travelers' awareness of health and wellbeing (Techasriamornrat, 2021). In Thailand, the government has recognized this potential and has been actively promoting wellness tourism as part of its strategy to become a "Medical Hub" within the next 10 years (2017–2026). It aims to leverage the limited potential, capabilities, health resources, natural resources, Thai wisdom, and community to create wellness services and products with unique identities that meet tourists' needs Nongsai et al., (2022). This approach distributes income to communities and less visited areas, as well as adds value to wellness tourism. Marketers play a key role in helping businesses define and deliver high-quality products and services to their target customer groups. There are six key principles they should adhere to: first, the ability to identify customer needs accurately; second, the ability to effectively communicate customer expectations to the design team to ensure that products meet those expectations; third, accuracy in order fulfillment and timely delivery; fourth, the provision of appropriate advice, training, and technical assistance; fifth, consistent follow-up with customers after sales to ensure continuous satisfaction; and finally, the systematic collection of customer opinions for product and service improvement and the appropriate communication of this feedback to the relevant department. (Kotler & Keller, 2009; Kanjanasilanon, 2021)

Additionally, the Royal Coast or Thailand Riviera, consisting of the provinces of Phetchaburi, Prachuap Khiri Khan, Chumphon, and Ranong along the western Gulf of Thailand, is an important tourist destination due to its diverse historical and natural attractions. This area has been designated as "The Royal Coast" (Office of the Permanent Secretary, 2017), a SMART destination that focuses on enhancing quality of life and promoting wellness tourism. It is capable of accommodating quality tourists and fostering sustainable tourism.

The focus on Hua Hin District in Prachuap Khiri Khan province is particularly relevant due to its established reputation as a popular tourist destination with a mix of beach resorts and cultural attractions. As the Thai government continues to promote wellness tourism as part of its national strategy to enhance the country's competitiveness in the global tourism market, Hua Hin presents an ideal setting for this transformation.

The wellness tourism industry is experiencing growing trends and increasing demand for holistic health experiences among travelers. As the global wellness tourism market continues to expand, with a projected compound annual growth rate of 7.2% from 2022 to 2030 (Global Wellness Institute, 2023), there is a significant opportunity for existing 3-star hotels to capitalize on this trend. By transforming into wellness hotels, these establishments can not only meet the evolving needs of health-conscious travelers but also potentially increase their market share and revenue streams.

Despite the potential benefits of transitioning to wellness hotels, there is a notable research gap in understanding how User Experience (UX) and User Interface (UI) design principles can be effectively applied to facilitate this transformation, particularly for 3-star hotels with limited resources. While studies have examined the general characteristics of wellness hotels (Chi et al., 2020), there is a dearth of research on the specific design strategies that can bridge the gap between standard 3-star hotel offerings and wellness hotel expectations. The 3-star hotels in Hua Hin District, Prachuap Khiri Khan Province, face a significant challenge in providing sufficient information about services and products that support wellness tourists. Most hotel websites are not designed for wellness tourists; wellness service information is unclear; there is a lack of displayed nutrition information on healthy food menus; and there is insufficient signage to communicate wellness services. Additionally, a lack of user-friendly interfaces on the website, menu, and signage hinders the delivery of the wellness-related experience that modern tourists seek.

UX/UI design enhances service accessibility and the tourist experience by focusing on user needs, behaviors, and preferences. A well-designed interface improves navigation, allowing users to easily access health activities and essential services. The inclusion of clear icons, responsive layouts, and user-friendly menus makes it accessible to all users, including non-native speakers and people with disabilities. The use of cool colors and natural materials enhances user convenience and reinforces the wellness theme. In addition, storytelling

elements, such as QR codes linked to local wisdom, are more appealing to tourists. Recent research confirms that user-centered design significantly increases satisfaction, making services more appealing to modern health-seeking tourists.

This research focuses on 3-star hotels in Hua Hin District, Prachuap Khiri Khan Province, which are locally owned and have the potential to be enhanced or improved to become wellness hotels. It aims to transform 3-star hotels into wellness hotels by using the User-Centered Design (UCD) approach. This involves designing prototypes of products and services, including websites, menus, and signage, that better align with user needs and behaviors, thereby enhancing the user experience. In addition, it aims to provide practical insights and design strategies that can guide these hotels in their transition to "wellness-focused" establishments, thereby contributing to the broader development of Thailand's wellness tourism sector.

Objective

This research aimed to develop and evaluate prototypes of websites, menus, and signage to enhance 3-star hotels in Hua Hin District, Prachuap Khiri Khan Province, transforming them into wellness hotels.

Literature Reviews

The transformation of traditional hotels into wellness-focused establishments has gained significant attention in recent years, driven by the growing demand for health-oriented travel experiences. This section synthesizes current research on user-centered design (UCD), User Experience (UX), and User Interface (UI) in the context of wellness hotels, highlighting their potential to facilitate this transformation.

1. User-Centered Design in Wellness Hotel Development

User-centered design (UCD) has emerged as a crucial approach in developing effective wellness hotel experiences. Lowdermilk (2013) and Smitha (2022) emphasize the importance of understanding user behavior, needs, and limitations in creating successful wellness products and services. This approach aligns with the findings of Kadieva (2015), who highlights the need to focus on users' emotions, satisfaction, and experiences when interacting with wellness offerings.

Recent studies have demonstrated the efficacy of UCD in various aspects of hotel design and service development. Hasna & Wahyu (2022) and Nor et al.

(2021) highlight how UCD methodologies can be applied to create more user-friendly digital interfaces for travel and tourism applications. These findings are particularly relevant for wellness hotels, where digital touchpoints play a crucial role in communicating health-oriented services and creating a seamless guest experience.

2. UX/UI Design in Wellness Hotel Transformation

The application of UX/UI design principles in the hospitality industry has shown promising results in enhancing guest satisfaction and engagement. Vatsal & Ankit (2021) highlight the importance of intuitive interfaces in creating positive user experiences, while Yudho et al. (2022) demonstrate how effective UX/UI design can significantly improve website functionality and user engagement for hospitality businesses.

In the context of wellness hotels, UX/UI design takes on added significance. A study by Bong et al. (2022) illustrates how user-centered design approaches can be leveraged to create digital platforms that effectively communicate health and wellness information, a critical aspect of wellness hotels. This is further supported by the work of Diah et al. (2023), who shows how redesigning tourism websites using UCD principles can significantly improve user engagement and satisfaction.

3. Case Studies of Successful Hotel Transformations

Several case studies highlight the successful transformation of traditional hotels into wellness-focused establishments through strategic design interventions. For instance, Masagué & Macià (2015) present a case study of a wellness product design that emphasizes the importance of emotional design in creating memorable wellness experiences. This approach can be extended to hotel environments to create immersive wellness atmospheres.

A notable example is the Six Senses hotel chain, which has successfully integrated wellness principles into its design and operations. Their approach, which includes customized wellness programs and sustainable design elements, has been widely recognized in the industry (Hoover, 2022). Similarly, the COMO hotel group has demonstrated how traditional urban hotels can be transformed into wellness retreats through thoughtful design and service offerings (Abdo & Shokry, 2020)

These case studies underscore the potential for 3-star hotels to enhance their offerings and transition into the wellness sector through strategic design interventions, particularly in digital touchpoints and service presentations.

In conclusion, the literature highlights the significant potential of UCD and UX/UI design in facilitating the transformation of traditional hotels into wellness-focused establishments. However, there remains a gap in understanding how these principles can be specifically applied to 3-star hotels with limited resources. This study aims to address this gap by exploring practical design strategies for enhancing websites, menus, and signage to create a cohesive wellness experience in the context of 3-star hotels in Hua Hin, Thailand.
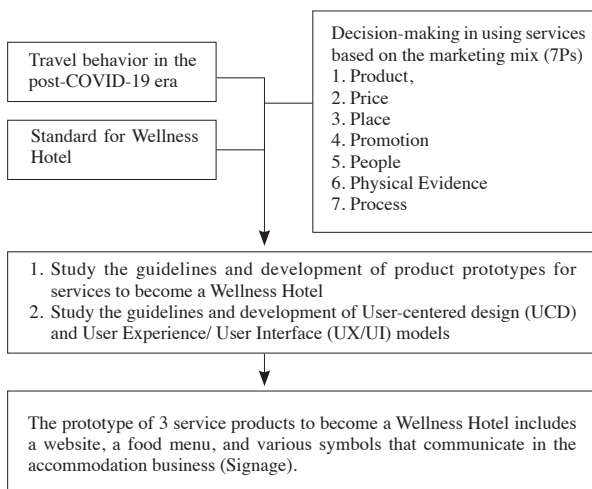
Conceptual Framework

Figure 1 Conceptual framework

Research Methodology

This study employed a mixed-methods approach, combining qualitative research through interviews with 50 tourists and three key informants to gain in-depth insights into user experiences and preferences (Creswell & Poth, 2018). This was complemented by quantitative research through structured evaluation questionnaires administered to 50 hotel entrepreneurs and related agencies to assess the effectiveness of design prototypes (Truong et al., 2020). The qualitative component provided rich, descriptive data about user needs and expectations, while the quantitative component enabled systematic measurement of satisfaction levels and design effectiveness through 5-point Likert scales. This mixed-methods design allowed for comprehensive understanding through both detailed insights and statistical validation of the findings (Taheri & Okumus, 2024).

1. Research Design

The study follows a case study design, focusing on 3-star hotels in Hua Hin District, Prachuap Khiri Khan Province. This design allows for an in-depth exploration of the specific context and challenges faced by these hotels in their potential transformation to wellness hotels (Yin, 2018).

The research was conducted in three main phases, adapting the User-Centered Design (UCD) approach to our qualitative framework:

1) User Requirement Study and Analysis: This phase involved in-depth interviews with tourists and key informants to understand their needs, expectations, and challenges related to wellness hotels.

2) Designing and Developing Prototypes: Based on the insights from the first phase, prototypes were developed for websites, menus, and signage that align with user needs and wellness hotel concepts.

3) Usability Testing and Evaluation: The prototypes were evaluated through qualitative feedback from a subset of participants and key informants, focusing on their perceptions of usability and effectiveness.

2. Data Collection

Data collection was conducted through two primary methods:

1) Semi-structured interviews with tourists (n=50)

2) In-depth interviews with key informants (n=3)

2.1 Tourist Interviews

50 tourists were selected using a purposive sampling strategy. The criteria for selection included:

- Adults (18 years and above)

- Interest in wellness tourism (self-reported)

- Recent stay (within the last 6 months) at a 3-star hotel in Hua Hin or intention to stay shortly

The sample size of 50 was determined based on the concept of data saturation, where interviews were continued until no new themes emerged (Guest et al., 2006).

The interview protocol consisted of 15 open-ended questions, covering topics such as:

- Expectations for wellness hotels

- Desired wellness activities and amenities

- Preferences for digital interfaces (websites, mobile apps) in hotel selection and stay

- Opinions on menu design and nutritional information presentation

- Views on effective signage and wayfinding in hotels

Each interview lasted 30–45 minutes and was conducted in person or via video call, depending on the participant's preference and availability.

2.2 Key Informant Interviews

Three key informants were selected based on their expertise in the wellness hotel industry. They included:

- A wellness hotel manager with over 10 years of experience

- A UX/UI designer specializing in hospitality industry projects

- A wellness tourism consultant

These in-depth interviews lasted 45-60 minutes each and focused on industry trends, challenges in transforming 3-star hotels to wellness hotels, and the role of UX/UI design in enhancing guest experiences.

3. Data Analysis

The qualitative data were analyzed using thematic analysis (Braun & Clarke, 2006). The process involved the following steps:

1) Familiarization with the data: All interviews were transcribed verbatim and read multiple times to gain familiarity with the content.

2) Generating initial codes: Using NVivo 12 software, the transcripts were coded line by line to identify relevant features of the data.

3) Searching for themes: Codes were collated into potential themes that captured important aspects of the data in relation to the research questions.

4) Reviewing themes: Themes were checked against the coded extracts and the entire dataset to ensure they accurately represented the data.

5) Defining and naming themes: Clear definitions and names for each theme were developed to capture the essence of what each theme was about.

6) Producing the report: Compelling extract examples were selected, and the analysis was related back to the research question and literature.

4. Prototype Development and Evaluation

Based on the themes identified from the interviews, prototypes for websites, menus, and signage were developed using Figma for digital interfaces and Adobe Illustrator for print materials. These prototypes were then evaluated through a usability testing phase with a subset of the original participants (n=10) and the key informants.

The evaluation process involved: After refining the products and services prototypes, the researcher provided training on the designed products and services, including the website, menu, and signage, to fifty 3-star hotel entrepreneurs and related agencies in Hua Hin District, Prachuap Khiri Khan Province. This aimed to disseminate guidelines for designing websites, menus, and signage that align with customer needs, thereby transforming 3-star hotels into wellness hotels. Satisfaction with the efficiency of the wellness service and product prototypes was evaluated using a questionnaire.

5. Ethical Considerations

Ethical approval for this study was obtained from the Research and Development Institute, Suan Dusit University. All participants were provided with information sheets detailing the study's purpose and their rights and signed informed consent forms before participating. Data were anonymized and stored securely to protect participants' confidentiality.

Results

1. User Requirement and Analysis

The needs and expectations of 50 tourists who wish to stay in wellness hotels, as collected and analyzed, are summarized in the following key points:

- The top three expected wellness activities were hydrotherapy (16.7%), health exercise (16.0%), and massage (12.8%), respectively.

- The top three expected food and nutrition therapies were healthy food menus (30.9%), healthy beverages (20.0%), and the use of local ingredients as materials for cooking healthy food menus (14.5%).

- The top three reasons for choosing to stay at a wellness hotel were facilities (7.9%), reviews, location, accessibility, and the comfort (7.6%), and room decoration (7.1%).

- The top five expectations of tourists when staying at wellness hotel were wellness activities, healthy food menus, suitable location, and atmosphere for relaxation, providing wellness information and services from staff, wellness information on the website, signage and symbols related to wellness information.

2. Key Informant Interview Findings

In-depth interviews with three key informants (wellness hotel manager, UX/UI designer specializing in hospitality, and wellness tourism consultant) revealed critical insights for transforming 3-star hotels into wellness hotels:

2.1 Strategic Transformation Requirements - The wellness hotel manager emphasized three key areas for successful transformation:

- Essential Wellness Services: Focus on core wellness activities that can be implemented within the existing infrastructure, prioritize services with low initial investment, and integrate local wellness practices to create unique experiences.

- Staff Development: Provide basic wellness service training for existing staff, develop wellness service protocols, and integrate wellness concepts into daily operations.

- Physical Space Adaptation: Make minimal modifications to create wellness atmospheres, use existing spaces strategically for wellness activities, and implement cost-effective solutions for wellness facility development.

2.2 Digital Experience Design - The UX/UI design expert highlighted critical elements for effective digital presence:

- Website Design Priorities: Implement simple, intuitive navigation systems, present wellness offerings, adopt a mobile-first design approach, and integrate local cultural elements.

- Digital Communication Strategies: Focus on essential wellness information, use visual storytelling, integrate user-generated content, and provide simple booking and inquiry systems.

- Content Management: Provide regular updates on wellness program information, integrate guest feedback, promote seasonal wellness offerings, and highlight local wellness experiences.

2.3 Market Positioning and Development - The wellness tourism consultant provided insights on market positioning:

- Target Market Identification: Focus on value-conscious wellness tourists, appeal to the domestic wellness market, target specific wellness niches, and leverage local tourism patterns.

- Competitive Advantage Development: Emphasize authentic local experiences, implement price-value positioning strategies, integrate with local wellness providers, and develop unique wellness packages.

- Growth Strategies: Use a phased implementation approach, develop partnerships with local providers, focus on sustainable wellness practices, and enhance services continuously.

2.4 Common Themes Across Interviews -

Analysis revealed several recurring themes across all three interviews:

- Focus on Authenticity: Integrate local wellness traditions, use local ingredients and materials, connect with the local community, and emphasize genuine experiences.

- Resource Optimization: Use existing facilities efficiently, invest strategically in essential equipment, adopt staff multi-skilling approaches, and integrate technology for efficiency.

- Market Differentiation: Provide unique local wellness experiences, implement value-focused pricing strategies, deliver quality services, and build strong local connections.

- Implementation Challenges: Limited investment resources, staff training requirements, market perception management, and competition from higher-rated properties.

These qualitative findings provided the foundation for developing and evaluating the website, menu, and signage prototypes, ensuring they addressed the specific needs and challenges of 3-star hotels transitioning to wellness properties.

3. Website design prototype for wellness hotel

The website design suitable for wellness hotels utilizes cool colors to provide users with a comfortable and natural experience. Color tones that reflect a wellness hotel, include earth tones, greens, blues, whites, and brick oranges. The presentation emphasizes various digital media formats, including still images, videos, infographics, storytelling, wellness reviews, and
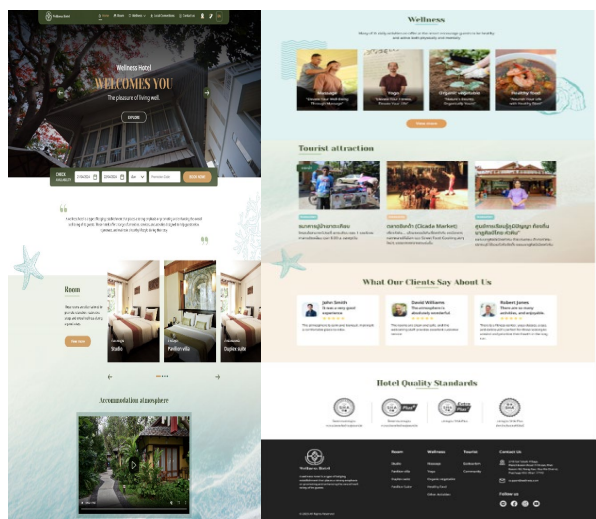

Figure 2 Home page of website

information on the hotel's received standards and certifications to demonstrate credibility in providing wellness services on the home page, as shown in Figure 2.

The Room menu shows the various room types available. Tourists can click to see details of the room and facilities, as shown in Figure 3.
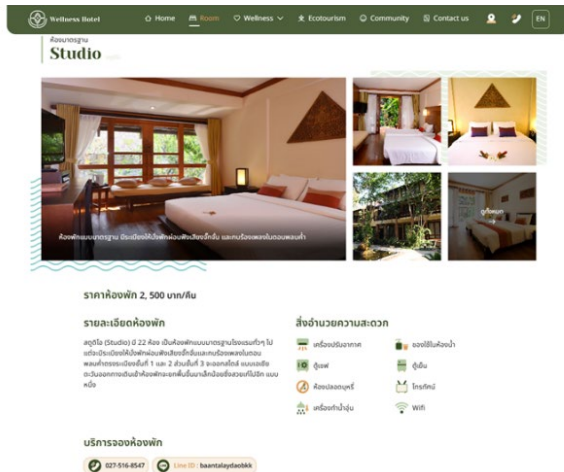

Figure 3 The Room menu

The Wellness menu is a crucial feature of a wellness hotel. It includes the hotel's wellness activities such as massage, yoga, spa, fitness, various exercise activities for health, meditation activities, and activities that promote mental well-being, as shown in Figure 4.
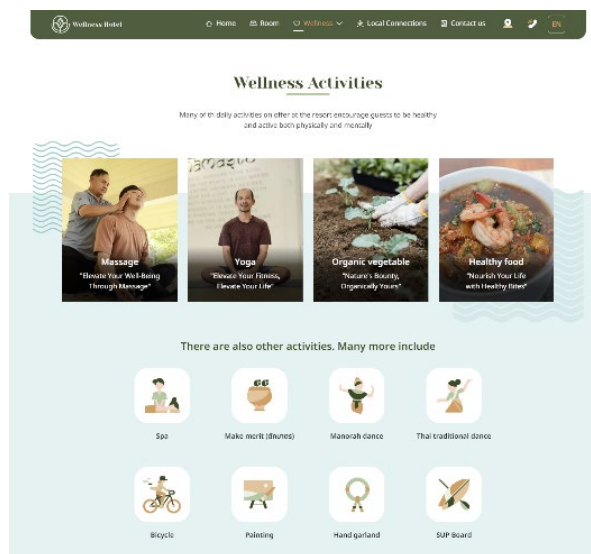

Figure 4 The Wellness menu (1)

Apart from wellness activity information, the Wellness menu also covers Food and Nutritional Therapy, which includes healthy food menus and healthy beverages offered by the hotel. It shows food ingredients, calorie information, and may feature the hotel's signature healthy dishes or drinks to create a unique selling point. Activities such as vegetable gardening are also included, as shown in Figure 5.
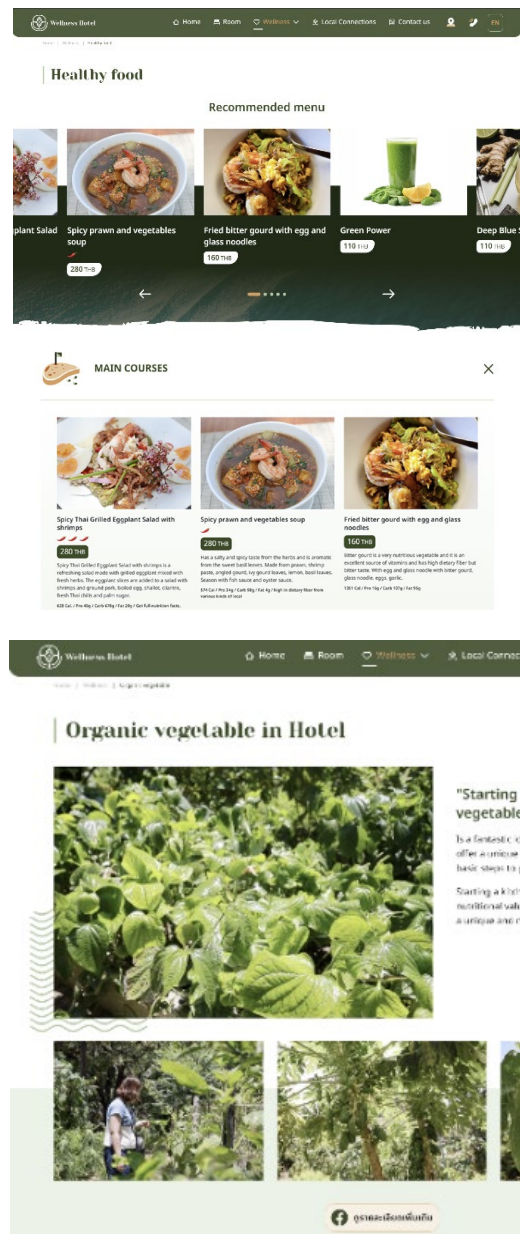

Figure 5 The Wellness menu (2)

The Local Connections menu features community tourist attractions that connect to local wisdom or environmental conservation activities, allowing tourists to participate in authentic local activities such as lifestyles, cultures, and traditions. This promotes well-being, environmental conservation, and community sustainability. Recommended nearby attractions are also listed to provide tourists with sightseeing options, as shown in Figure 6.
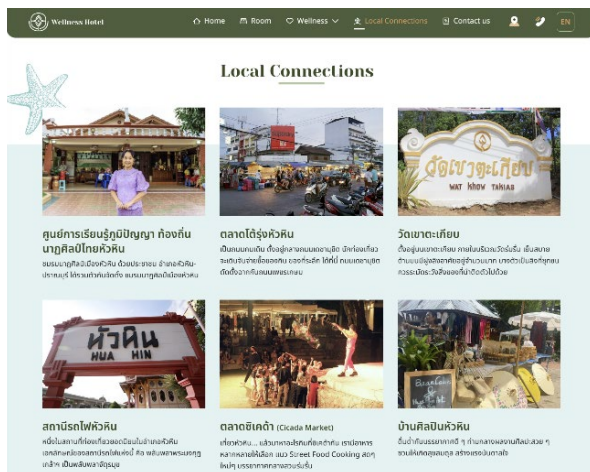

Figure 6 The local connections menu

The Contact Us menu provides information for tourists to contact the hotel through various platforms for convenience. It also displays the hotel's location and map, as shown in Figure 7.
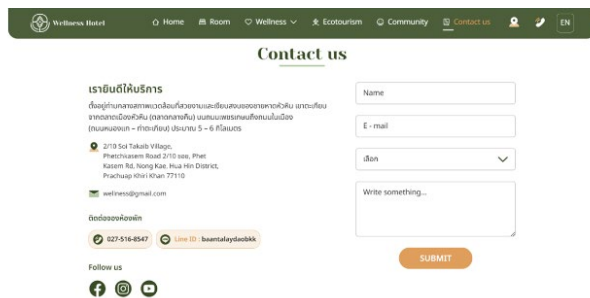

Figure 7 The Contact us menu

4. Menu design prototype for wellness hotel

The menu should have icons to convey meaning and help tourists understand the wellness information being communicated. For example, ingredients that provide health benefits or added nutritional value should be clearly indicated with icons representing those attributes. Presenting the benefits and

nutritional value allows tourists to be informed about what they are consuming. This builds trust and confidence for health-conscious tourists, as shown in Figure 8 and Figure 9.

Figure 8 Menu design prototype (1)

Figure 9 Menu design prototype (2)

Presentation of food and beverage menus uses storytelling techniques, accompanied by images showing the origins or sources of the ingredients. This approach adds value and connects to local wisdom, the surrounding communities, people involved with the hotels, as well as the hotel's health and environment-friendly operations. Utilizing QR codes, tourists can scan to view the information.

5. Signage design prototype for wellness hotel

The signage for the hotels consists of safety signs, and wayfinding signage, with text in English. Cool and easy-on-the-eyes color tones are used. Local signage representing the identity of the area is incorporated into the backgrounds, reflecting lifestyles, culture, traditions, landmarks, and regional distinctions. These elements are blended with designs conveying wellness, as shown in Figure 10.

Figure 10 Way finding signage

Figure 11 The storytelling of products by QR code scanning

Natural materials are used, designed with local patterns, or painted imagery in an environmentally friendly. Storytelling is incorporated through easy-to-understand messages that pique tourists' interest, accompanied by photos to support the narratives. Importantly, QR codes are provided for tourists to scan and view or listen to the stories, as shown in Figure 11.

6. Overall Prototype Evaluation

After implementing the services and product prototypes of wellness at a 3-star hotel in Hua Hin, Prachuap Khiri Khan province for one week, interviews with the owner, front office staff, and food and beverage staff provided the following feedback:

Website: The website prototype design received positive feedback for its appropriate mood and tone, ease of use, and straightforward interface. It effectively presents information through various media, with clear categorization of content. Important details about wellness activities and food and nutrition therapy, essential for wellness hotels, are prominently included.

Menu: Satisfaction was expressed with the prototype displaying menu ingredients, cooking options, and food and beverage recommendations, along with nutritional benefits and value. This informs tourists about what they are consuming, building trust and confidence for health-conscious diners.

Signage: Satisfaction was expressed with the mood and tone design using cool, easy-on-the-eyes color tones. It incorporates local Hua Hin symbols into the backgrounds. The signage sizing is appropriate for easy visibility, and the font styles, sizes, and colors are suitable and easy to understand.

The results of the evaluation design of the products and services prototypes including websites, menu, and signage, from 50 3-star hotel entrepreneurs and related agencies in Hua Hin District, Prachuap Khiri Khan Province, are shown in Table 1.

Table 1: Means and Standard Deviations of Satisfaction Toward the Effectiveness of the Wellness Products and Services Prototypes

Evaluation Issues	$\bar{x}$	S.D.	Satisfaction
1. Menu	4.23	0.340	highest
2. Signage	4.27	0.314	highest
3. Website	4.24	0.253	highest
Overall Satisfaction	**4.24**	**0.267**	**Highest**

From Table 1, The overall satisfaction with the effectiveness of the wellness service and product prototypes was at the highest level, with a mean of 4.24. When categorized by area, satisfaction was at the highest level for the signage, with a mean of 4.27 (S.D. = 0.314). Followed by the website, with a mean of 4.24 (S.D. = 0.253) and the menu, with a mean of 4.23 (S.D. = 0.340).

Discussion

To enhance the 3-star hotels into wellness hotels, entrepreneurs should improve their products and services to enter new consumer markets and attract additional tourists interested in staying at wellness hotels (Tetiana & Oksana, 2023). According to this study, the top five expectations of tourists for staying at a wellness hotel are: wellness activities, healthy food menus, suitable location, and atmosphere for relaxation, providing wellness information and services from staff, wellness information on the website, show signages and symbols related to wellness information. Therefore, for hotels to transition into wellness hotels, entrepreneurs need to improve and develop wellness services and products that meet tourists' expectations through website, menu, and signage (Smitha, 2022; Bendegul & Heather, 2022). By interviewing tourists who are interested in staying at wellness hotels and the experts in the wellness hotel industry, user experience can be linked and analyzed to design wellness hotel services and product prototypes that meet tourists' needs (Bong et al.,2022; Diah et al., 2023; Bendegul & Heather, 2022; Ari & Vivi, 2021; Masagué & Macià, 2015).

The discussion of the research results is as follows:

1. Transformation Strategies for 3-Star Hotels

1.1 Digital Transformation Considerations

The high satisfaction ratings for website design (mean = 4.24, SD = 0.253) suggest that digital transformation can be effectively achieved within the constraints of 3-star hotels. Unlike luxury wellness properties that often implement complex digital systems, the findings indicate that simpler, focused solutions can be equally effective for 3-star establishments. This aligns with Kim & Lee's (2022) findings that user satisfaction in hotel websites correlates more strongly with ease of use than with feature complexity.

Key differentiating factors for 3-star hotels include focus on essential wellness information, mobile-first design approach, and integration of local wellness experiences.

1.2 Cost-Effective Wellness Integration

The results demonstrate that 3-star hotels can effectively integrate wellness elements without extensive infrastructure changes. The high satisfaction rating for the menu design (mean = 4.23, SD = 0.340) suggests that simple modifications in food presentation and nutritional information can significantly enhance the wellness experience. This contrasts with Chi et al.'s (2020) findings on luxury wellness hotels, where extensive menu redesigns and specialized kitchen equipment were considered essential.

2. Market Position and Competitive Advantage

2.1 Unique Value Proposition

The study reveals distinct opportunities for 3-star hotels in the wellness market:

1) Local Integration Advantage: There is a higher preference for local wellness experiences compared to standardized international offerings, a strong interest in local ingredients, and an opportunity for unique positioning through authentic local wellness practices.

2) Price-Value Relationship: Cost-effective wellness activities were preferred, focusing on essential wellness services rather than luxury amenities, and higher perceived value through local authenticity.

2.2 Competitive Differentiation

The findings challenge the assumption that effective wellness hotels must be luxury establishments. The high overall satisfaction ratings (mean = 4.24, SD = 0.267) demonstrate that 3-star hotels can successfully compete in the wellness market through:

1) Focused Service Offering: Emphasis on popular wellness activities, clear communication of health benefits, and integration with local wellness traditions.

2) Efficient Resource Utilization: Strategic use of existing facilities, cost-effective design solutions, and technology integration for service enhancement.

3. Cultural and Regional Context

3.1 Thai Tourism Integration

The study demonstrates successful adaptation of wellness concepts to Thai context:

1) Local Culture Integration: There is high satisfaction with the integration of local elements (mean = 4.26, SD = 0.315), effective use of Thai wellness traditions, and strong connection to local communities.

2) Regional Market Alignment: Alignment with Thai tourism development goals, support for local wellness tourism growth, and provision of a model for regional development.

3.2 Scalability and Adaptation

The findings suggest potential for:

1) Regional Expansion: Adaptable design principles, transferable implementation strategies, and flexible wellness integration models.

2) Cross-Cultural Application: Universal design elements, culturally adaptable components, and scalable wellness solutions.

Theoretical and Practical Implications

After training 50 three-star hotel entrepreneurs and related agencies in Hua Hin District, Prachuap Khiri Khan Province, on the designed prototypes of products and services, including the website, menu, and signage, 13 entrepreneurs expressed interest in using these prototypes at their hotels. The remaining 37 are considering the prototype data for deployment in their hotels.

This study contributes to the academic field of wellness tourism and UX/UI design in several ways:

1. It bridges the gap between wellness tourism literature and UX/UI design principles, particularly in the context of budget-friendly accommodations.

2. The findings challenge the notion that effective wellness experiences are exclusive to luxury hotels, providing insights into how 3-star hotels can compete in this market.

3. The study extends the application of User-Centered Design (UCD) principles to the specific needs of wellness-oriented budget travelers, a previously understudied demographic.

The research findings extend current theoretical frameworks by adapting UX/UI principles through simplified design approaches for budget constraints, the integration of local elements in wellness communication, and a mobile-first strategy for budget-conscious travelers.

In practical terms, this research offers actionable guidelines for three-star hotel owners and managers looking to enter the wellness market. The high satisfaction rates with the prototypes (overall mean = 4.24, SD = 0.267) suggest that even with limited resources, significant improvements in guest experience are achievable through targeted UX/UI enhancements.

Comparing the study's satisfaction levels with those reported in a recent study by Johnson et al. (2023) on luxury wellness hotels (mean satisfaction = 4.1), the results suggest that well-designed UX/UI elements can help 3-star hotels achieve comparable levels of guest satisfaction in certain areas, particularly in digital touchpoints.

Limitations

Several limitations should be noted:

1. Methodological Constraints: A focus on single geographic area, limited sample size, and time constraints on implementation assessment

2. Scope Limitations: A focus on specific design elements, limited economic impact analysis, and short-term evaluation period

Conclusion

This research aims to enhance three-star hotels in Hua Hin District, Prachuap Khiri Khan Province, into wellness hotels by applying the User-Centered Design (UCD) approach to develop prototypes of products and services, including websites, menus, and signage, following these guidelines:

Website: The website serves as a key channel for communicating and reaching tourists. Wellness information is crucial for wellness hotel websites. This includes details about wellness activities and disclosed wellness services, wellness reviews demonstrating credible service delivery, links to external vendor information or partners/community tourism sources connected to local wisdom, information about the area and people involved with the hotel, as well as environmentally friendly operations. Food and nutritional therapy information should list menu ingredients, calories, and any signature healthy food menu or beverages unique to the hotel creating a distinctive offering. The website design should have a calming mood and tone achieved through appropriate use of color, fonts, and layout, ensuring easy reading without excessive vibrancy. Varied digital media formats such as still images, videos, infographics, and photo storytelling should be employed to engage website visitors.

Menu: Icons should be used to convey meaning and help tourists understand communicated health attributes. Menu and beverage recommendations, along with nutritional benefits and value, allow tourists to be informed about what they are consuming, building trust and confidence for health-conscious diners. Food and beverage menus can be presented as storytelling with images showing the origins of ingredients to add value and connect to local wisdom, the area, the people involved with the hotels, and the hotel's wellness and environmentally friendly operations. QR codes enable tourists to scan and view information.

Signage: Signage consists of safety signs and alerts, and wayfinding signage using English or English

alongside Thai and other languages for specific tourist groups. Cool, and easy-on-the-eyes color tones are used along with local signage reflecting the area's identity. Storytelling about natural/eco-friendly product materials blends with health-centric designs. Natural materials are used with local patterns or painted imagery in an environmentally friendly manner. Brief, easy-to-understand storytelling narratives stimulate tourist interest, presented via QR codes for tourists to scan and view or listen to the stories.

This study explores how three-star hotels can be transformed into wellness hotels through user-centered design and UX/UI design. Prototypes for websites, menus, and signage were developed to create a cohesive wellness experience within the limitations of three-star hotels. The findings emphasize the importance of clearly communicating wellness offerings, providing intuitive digital interfaces, and employing thoughtful physical design to meet traveler expectations. Positive feedback from tourists and industry experts suggests that these design elements can improve guest experiences. Implementing these strategies may enhance the appeal and competitiveness of three-star hotels in the wellness tourism market.

Future research

Entrepreneurs should focus on developing effective websites by combining 360-degree virtual reality (VR) videos with a navigation-focused design and a high-quality visual interface. This will significantly increase user engagement and directly affect satisfaction. Good website design helps refine and enhance 360-degree VR videos, resulting in more satisfied users who are more likely to visit actual tourist attractions. There is also a high chance of users recommending or spreading their positive experience through online channels. This is an effective strategy for promoting tourism marketing in the digital age. (Rafi et al., 2024) Therefore, it is another approach that will be used to further develop the UX/UI design of the website for transforming 3-Star Hotels into wellness hotels by adding a 360-degree video format. Additionally, integrating eco-friendly practices in hotels will benefit the environment, create economic opportunities, and improve the reputation of the hospitality sector (Chiangphan, N. & Vongsaroj, R., 2023) helping to upgrade 3-star hotels to eco-friendly wellness hotels.

Practical Recommendations: Based on the findings, it is recommended: for hotel managers, a phased implementation of wellness elements, with a focus on mobile-first digital solutions, and the integration of local wellness traditions; and for industry stakeholders, the development of budget wellness standards, support for local wellness integration, and investment in staff training programs.

While this study provides valuable insights, it has certain limitations. The focus on Hua Hin may limit generalizability of the findings to other regions. Future research could:

1. Expand to different regions in Thailand and internationally to test the applicability of these findings.

2. Conduct longitudinal studies that would be beneficial to assess the long-term impact of these UX/UI enhancements on hotel performance and guest satisfaction.

3. Explore the integration of more advanced technologies such augmented reality (AR) and virtual reality (VR) to create budget-friendly wellness experiences in three-star hotels.

4. Investigate the potential for 3-star hotels to create unique wellness niches, such as focusing on specific wellness practices or catering to particular health concerns.

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