

A Study on the Packaging Experience Design of Macao Herbal Tea Based on Emotional Design

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Abstract. Addressing the current market challenges faced by "Macao Herbal Tea," including monotonous packaging forms, stereotypical impressions of bitterness, and low acceptance among Generation Z, this study utilizes the three-level theory of emotional design as its core framework. It constructs a packaging design pathway for the Z generation: At the Visceral Level, sensory metaphors through visual, color, and graphic elements are employed to mitigate the stereotypical impression of bitterness; at the Behavioral Level, scenario-based packaging experiences are optimized to overcome the limitations of traditional physical store sales; at the Reflective Level, the health philosophy of Macao herbal tea is integrated to guide the cognitive shift towards "daily light nourishment." Based on the emotional needs of Generation Z, this study conducts innovative design practices on the packaging of the Macao Bai Jiachang herbal tea brand, aiming to facilitate the youth-oriented transformation of Macao herbal tea and broaden its sales channels.

Keywords: Macao Herbal Tea; Emotional Design; Packaging Design; Generation Z

1. Introduction

As an intangible cultural heritage jointly declared by Guangdong, Hong Kong, and Macao, Macao Herbal Tea carries the city's century-old dietary culture and historical memory, serving as a vital component of Macao's cultural tourism resources. However, facing the new consumption wave, traditional herbal tea brands are struggling due to their adherence to a singular physical store sales model, leading to stagnant market growth and declining youth acceptance. The root cause lies in the generational shift in consumers. As Generation Z becomes the dominant force in the beverage market, consumer decision-making has shifted from a singular functional orientation to a comprehensive consideration of visual aesthetics, functional utility, and emotional value[1]. The "function-heavy, experience-light" packaging design of traditional Macao Herbal Tea has become a primary obstacle hindering its youthful transformation.

Existing research indicates that packaging innovation is an effective path for the revitalization of intangible cultural heritage and brand modernization[2]. Donald Norman's three-level theory of emotional design provides a systematic framework for packaging experience design. However, current studies on Macao Herbal Tea are predominantly focused on historical and cultural review, with a notable lack of specialized research targeting packaging experience design and youthful transformation. Based on this, this study constructs a packaging experience design pathway for Macao Herbal Tea based on the three-level emotional design theory and the needs of Generation Z, using the Macao "Bai Jiachang" herbal tea brand as a case study, aiming to assist in the revitalization and inheritance of Macao Herbal Tea.

2. Overview of Relevant Theories

2.1 Emotional Design

Emotional design is an approach centred on the user's emotional experience, aiming to evoke emotional resonance through design, thereby enhancing the product's utility and psychological satisfaction[3]. According to Donald Norman's three-level theory, emotional design can be divided into the Visceral, Behavioral, and Reflective levels[4]. The Visceral Level stems from the positive sensory experiences a product provides to users, primarily conveying emotional information

through sensory stimuli such as sight and touch; the behavioural level focuses on the product's functionality and usability, enhancing the user experience through optimised features; the reflective level emphasises the special significance embodied by the product, capable of inspiring a deep emotional connection with users[5].

In packaging design, the application of emotional design principles is particularly important; it not only enhances the product's visual appeal but also establishes a long-term relationship between the brand and consumers through deep emotional resonance. Scholar Tang Li, in the design of traditional educational toy packaging, met users' psychological and cognitive needs precisely by incorporating cultural connotations and textual expressions[6]. This also provides an important basis for subsequent packaging design strategies for Macao herbal tea.

2.2 Generation Z

The term 'Generation Z' was first coined by Western scholars, building on the terminology of 'Generation X' and 'Generation Y', and was later refined by Angie Red and Jeff Fromm[7]. It refers to the younger generation born between 1995 and 2009[1]. Having grown up in the digital age, they have been deeply influenced by social media and internet technology, exhibiting distinctive consumer characteristics. Generation Z consumers seek personalisation and self-expression, tending to choose products that reflect their own values and lifestyle. Furthermore, against the backdrop of the rapid development of the e-commerce economy, they favour packaging designs that are highly recognisable, interactive and offer a contextualised experience. Such designs not only enhance the visual appeal of the product but also strengthen users' emotional engagement through unique unboxing experiences or social features[8]. Consequently, when designing herbal tea packaging for Generation Z, designers need to create solutions that not only meet functional requirements but also evoke an emotional response.

3. Current State of Macao Herbal Tea Packaging and Gen Z Consumer Demands

3.1 Current State of Macao Herbal Tea Packaging

As one of the representative traditional beverages of the Guangdong-Hong Kong-Macao region, the packaging design of Macao herbal tea has evolved historically from a functional orientation to a gradual emphasis on cultural expression. However, in the current market environment, the packaging forms of Macao herbal tea still predominantly consist of traditional glass bottles or plastic packaging, with an overall design approach centred on functional appeal and nostalgia. This not only solidifies the style of herbal tea packaging but also stifles designers' innovative thinking[9]. Through case studies of Macao herbal tea brands such as 'Bai Jiachang' and 'Da Sheng Gong', the author has found that the packaging designs of these brands generally suffer from a homogenisation of visual elements, failing to fully reflect the uniqueness of Macao's regional culture and brand identity. For instance, Macao's historic architecture and distinctive culinary culture have not been adequately showcased in the packaging designs. Compared to modern herbal tea brands such as Wang Lao Ji, this highlights the shortcomings of Macao's herbal tea packaging design in conveying cultural value, which is also one of the reasons why it currently struggles to attract Generation Z consumers. Furthermore, the existing packaging is largely confined to dark colour schemes, reinforcing consumers' initial impression of herbal tea as 'bitter' and failing to meet the aesthetic expectations of the younger generation regarding product appearance.

3.2 Generation Z's Consumption Needs for Herbal Tea

Generation Z has become the core consumer group in the beverage market. To explore Generation Z's genuine needs regarding Macao herbal tea, the author conducted semi-structured interviews with 15 members of Generation Z in Macao in April 2026. The interviews focused on

perceptions of herbal tea, packaging preferences and consumption scenarios. The interviews revealed that the traditional herbal tea packaging model, which “prioritises function over experience”, no longer meets their consumption needs. Thirteen respondents all held negative impressions of herbal tea as “traditional Chinese medicine” and “bitter”, and expressed a strong desire for fresh, vibrant design language to mitigate the stereotype of bitterness. Regarding functional experience, 10 respondents highlighted the limitations of traditional glass bottles, which are only available for purchase in physical stores. In terms of emotional experience, 11 respondents identified with the modern wellness concept of “daily light self-care”, and 7 expressed a strong desire to share on social media. They hoped that herbal tea packaging would incorporate unique local cultural elements from Macao, combining wellness value with social sharing attributes.

4. Design Strategies and Practices for Macao Herbal Tea Packaging Based on Emotional Design

4.1 Design Strategy

4.1.1 Visceral Level: Sensory Metaphor Design to Mitigate the Stereotype of Bitterness

At the Visceral Level of emotional design, elements such as colour and graphics serve as the first point of contact between consumers and the product. The product’s visual presentation can satisfy the sensory experiences of Gen Z consumers, leaving them with a favourable first impression[10]. To address the stereotype of Macao herbal tea’s bitterness, this study proposes design optimisation through sensory metaphor, using soft colours and playful graphics as core strategies to reduce consumers’ aversion to bitterness. In terms of colour, by selecting hues that evoke the freshness of herbal plants and pairing them with accent colours that add a youthful, vibrant visual warmth, a visual tone of ‘light wellness’ is established. This guides consumers’ taste expectations from bitterness towards a sweet aftertaste or a refreshing, soothing sensation. Furthermore, playful graphic designs can further attract consumers’ attention, diverting their focus away from the taste. Specifically, by incorporating local Macanese cultural symbols or natural elements—such as lotus flowers or ocean waves—an emotional visual language can be established, creating positive psychological associations when consumers encounter the packaging[6]. This design approach aligns with Generation Z’s aesthetic demand for personalisation, whilst effectively alleviating their concerns regarding the taste of herbal tea, thereby laying the groundwork for subsequent behavioural-level experiences.

4.1.2 Behavioural Level: Contextualised Experience Design to Broaden Product Consumption Boundaries

Emotional design at the behavioural level emphasises optimising the packaging experience through contextualisation, thereby satisfying both the functional and emotional needs of users[11]. In the packaging design for Macao herbal teas, full consideration should be given to different usage scenarios—such as carrying on the go, drinking at home and sales in other regions—to design packaging forms that are both convenient and interactive, thereby breaking through the limitations of traditional in-store sales. For instance, in on-the-go scenarios, portable small-packet designs can be adopted, incorporating easy-tear openings and leak-proof technology to enhance user convenience. In social sharing scenarios, creative packaging designs can stimulate users’ desire to share; for example, modular packaging structures allow consumers to freely combine packaging units to create unique gift sets. Furthermore, in cross-regional retail and e-commerce expansion scenarios, instant-brew carton packaging has been introduced. This format not only meets the standardisation requirements of vending machines and e-commerce logistics but also addresses issues such as the short shelf life of traditional liquid herbal teas and the difficulties associated with cross-border transport. Through designs tailored to different scenarios, the project satisfies Generation Z’s demand for interactivity and fun, whilst expanding the consumption boundaries of

herbal tea through multi-scenario coverage. This transforms it from a traditional beverage confined to Macao into a daily wellness product capable of circulating across regions.

4.1.3 Reflective Level: Embedding Cultural Value to Foster Awareness of Daily Wellness

The emotional design of the Reflective Level focuses on establishing a deep emotional connection between consumers and the product through the exploration and expression of cultural significance[10]. The core strategy is to integrate the health-preserving philosophy of Macao herbal tea, thereby guiding the younger generation of consumers to develop a health-conscious understanding of ‘daily light wellness’. In terms of packaging visual design, rather than simply piling on historical references, traditional wellness wisdom is translated through a modern design language. Simple ingredient labels can be used to intuitively showcase the herbal nature and specific benefits of the herbal tea, helping Gen Z consumers quickly grasp the product’s value and view it as a health drink for everyday use—such as after late nights or greasy meals—rather than as a medicine for when they are ill.

At the same time, by incorporating elements unique to Macao, a soothing, life-affirming atmosphere is created through the details of the copywriting and illustrations. Regional colloquialisms such as “Have you had a drink yet?” and “Clear away the heat” have been specifically incorporated. This approach serves to mitigate the heavy, medicinal feel of the drink, whilst the use of friendly local dialect helps bridge the gap between the brand and consumers. This design strategy not only reinforces consumers’ identification with the “healthy, natural” values of Macao herbal tea, but also subtly alters their consumption habits, allowing the drink to become a genuine part of daily life.

4.2 Presentation of Design Proposals

Based on the aforementioned design strategies, this study took the Macao herbal tea brand ‘Bai Jiachang’ as its case study to design an innovative packaging solution targeting Generation Z consumers. Through the design of visual symbols, a colour scheme and product form, the proposal aims to facilitate the transformation of herbal tea from a ‘traditional medicinal drink’ to an ‘everyday light wellness beverage’.

In constructing the visual identity system, the proposal establishes a fresh colour scheme centred on mint green as the primary colour and pale pink as the secondary colour. This breaks away from the heavy feel of traditional herbal tea’s dark packaging, creating a light and unburdened visual impression. The brand’s primary visual graphic integrates elements of Macao’s landmarks with traditional herbal tea utensils (Fig.1), employing a flat illustration style for a cohesive design. The brand name “Bai Jiachang” is rendered in a modified calligraphic typeface, with rounded yet forceful strokes that retain a traditional flavour whilst aligning with the aesthetic preferences of the younger demographic.



Fig. 1 Visual Identity Design of Macao Herbal Tea (Drawn by the authors)

In terms of behavioural-level design, this proposal addresses the diverse consumption scenarios of Generation Z by developing two main product lines: ready-to-drink bottles and instant tea cartons. Appropriate opening mechanisms are adopted to suit the specific characteristics of different usage scenarios: the ready-to-drink bottles feature a standard screw-top design (Fig. 2-2), catering to the need for one-handed operation in mobile scenarios such as commuting and outdoor activities; the instant tea cartons utilise a tear-open seal design to reduce the operational burden in settings such as the office. Special adaptations have also been made for the new retail setting of vending machines: building on the highly recognisable colour scheme established at the Visceral Level, the design creates a visual focal point under the lighting conditions of vending machines (Fig. 2-3). This proposal effectively broadens the consumption boundaries of Macao herbal tea, transforming it from a single-channel in-store beverage into an everyday wellness product suitable for all scenarios.



Fig. 2-1 Overall Packaging System Display of Baijiachang Herbal Tea
Fig. 2-2 Ready-to-drink Bottled Herbal Tea Packaging Effect Display
Fig. 2-3 Packaging Application Display in Vending Machine Scenario

Fig.2 Comprehensive Display of Baijiachang Herbal Tea Packaging Design and Scenario Application (Drawn by the authors)

In terms of the Reflective Level, the design incorporates the historical origins and wellness philosophy of Macao herbal tea through copy and graphic details on the reverse side of the packaging. For example, the ‘Multifunctional Herbal Tea’ packaging features text such as ‘heritage pharmacy’ to reinforce the brand’s historical heritage; whilst the ‘Manqiu Fruit Extract’ packaging emphasises the use of extracts from the seeds of traditional Chinese medicinal fruits, highlighting its natural and healthy attributes. Furthermore, the packaging illustrations incorporate elements such as Portuguese-style street signs and scenes from traditional herbal tea shops, constructing a dual narrative of Macao’s local culture and modern lifestyles, thereby fostering a sense of cultural identity and emotional resonance among consumers as they enjoy the beverage.

5. Conclusion

Supported by the three-level theory of emotional design, this study constructs an innovative approach to the packaging experience design of Macao herbal teas, tailored to the consumption characteristics of Generation Z. Through market research and semi-structured interviews, it examines issues with current Macao herbal tea packaging — such as its monotonous forms and insufficient use of local cultural elements — and proposes targeted design strategies. At the Visceral Level, sensory metaphorical design through visuals, colours and graphics effectively mitigates consumers’ preconceived notions of the bitter taste of herbal tea; at the behavioural level, scenario-based experiential design optimises the packaging’s practicality and interactivity, breaking through the limitations of traditional in-store sales; at the reflective level, by incorporating the health-preserving philosophy and cultural value of Macao herbal tea, an emotional resonance between users and the product is established.

Based on the aforementioned theories and design strategies, this study selected the Macao Bai Jiachang herbal tea brand as a case study to conduct specific innovative design practices. The design proposal fully considers the emotional needs and consumption habits of Generation Z in aspects such as packaging appearance, demonstrating the practical application value of emotional design in herbal tea packaging. This study still has certain limitations; further optimisation of the design proposal is required in conjunction with market feedback to support the youth-oriented transformation and expansion of sales channels for Macao herbal tea in the new era of consumption.

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