National Journal of Advanced Research
www.nationaljournals.com
E-ISSN: 2455-216X
Received: 14-09-2026, Accepted: 14-10-2026, Published: 29-10-2026
Volume 12, Issue 4, 2026, Page No. 20-30

Generative AI marketing and service management in the healing industry: A holistic health perspective

Lung-Tan Lu
Department of Management, Fo Guang University, Taiwan
DOI: https://doi.org/10.66856/njar.2026.12.4.12040

Abstract
Global health industries are undergoing a paradigmatic shift from disease treatment towards preventive care and holistic healing, in which the definition of health has been expanded from the relief of isolated physical symptoms to the pursuit of balanced holistic health across four dimensions: physical, mental, spiritual, and social. Within this trend, the healing-service sector is confronted with demands for upgraded experiences and greater personalisation, while the maturation of artificial intelligence (AI) has opened new possibilities for service innovation and marketing enhancement. Generative AI, large language models (LLMs), and customer-data analytics are capable of assisting operators in identifying customer needs with precision, delivering personalised experiences, and optimising customer-relationship management; at the same time, however, they give rise to issues concerning data privacy, algorithmic ethics, and trust maintenance. Starting from holistic health theory, this study systematically examines the experience design of healing services, relationship management, and the architecture of AI-marketing innovation, and proposes governance mechanisms and evaluation methods for an integrated holistic health platform. First, relevant literature on the four-dimensional holistic health framework, healing-service experience theory, health-consumer behaviour, and AI marketing is reviewed, so that a theoretical foundation may be established. Second, the contours of healing needs across the physical, mental, spiritual, and social dimensions are analysed, and a service-journey and key-touchpoint model is constructed, in which the design principles of personalised healing services and the service-blueprint method are specified. Third, member management, story marketing, and crisis-management strategies for healing brands are discussed from a customer-relationship-management perspective, and the application scenarios and value of AI in customer segmentation, needs forecasting, generative marketing content, intelligent customer service, and service-journey optimisation are examined in depth. Finally, a business model, an LLM health-education assistant, a multi-source health-data governance mechanism, and design architecture for an integrated mind-body-spirit-society evaluation dashboard are proposed for the holistic health service platform.

Keywords: Healing industry, holistic health, AI marketing, service management, physical health, mental health, spiritual health, social health

Introduction

In the twenty-first century, the global health sector is confronted with a dual transformation of demand structure and supply model. On the demand side, as incomes rise, health awareness becomes more acute, and population's age, health is no longer defined merely as the absence of illness but as the overall balance and well-being of body, mind, spirit, and society. This trend has driven the rapid growth of industries associated with healing services, health preservation, and spiritual development. In their study of well-being-oriented hospitality, Han, Yu, and Hyun (2020) observed that contemporary consumers no longer settle for passive medical services but actively seek experiences that produce overall well-being, and that well-being experience, satisfaction, and affective commitment contribute materially to customer retention. This shift in demand structure has propelled the health sector from a medical orientation towards a healing orientation, while service settings have expanded from hospitals to communities, resorts, online platforms, and a variety of other venues. On the supply side, the rapid development of digital technology has acted as a key driver of innovation and upgrading in health services. The diffusion of artificial intelligence (AI), big-data analytics, the Internet of Things, and wearable devices has made personalised health services, precision marketing, and intelligent customer service feasible in ways that were previously difficult to achieve. Kaplan and Haenlein (2019) [5] noted that AI is reshaping the marketing and service industries: from customer insight and content generation to interactive service, efficiency may be substantially improved and costs reduced, while a scale of personalisation that was formerly unattainable may be realised. Within health and healing services, generative AI and large language models (LLMs) may further assume the roles of health-education assistants, intelligent customer service, and personalised advisers, thereby extending the capacity of service personnel and widening service accessibility.

The introduction of technology into healing services, however, is accompanied by a number of challenges. In the first place, there is the issue of trust. Healing services belong to a high-trust category, in which consumers place strong demands on warmth and sincerity; when AI marketing and intelligent customer service are poorly designed, they are readily perceived as cold and distant, with the result that brand trust may be damaged. In the second place, a balance must be struck between personalisation and privacy. Personalised healing services require the collection of sensitive physical, psychological, and even spiritual information, and how data may be secured and the principle of data minimisation observed

while personalisation is delivered constitutes a governance dilemma that operators are required to address. In their study of algorithmic ethics, Mittelstadt *et al*. (2016) [9] warned that algorithms deployed in the health domain ought to be highly transparent and accountable, so that algorithmic bias and misuse of data do not infringe consumer rights. In the third place, there is the challenge of service integration. Holistic health encompasses four dimensions, for which the corresponding service types, suppliers, and data sources are heterogeneous, and the integration of these elements into a coherent service experience and a unified evaluation framework represents a significant threshold for industrial upgrading. Current academic and practical discussions of healing services concentrate largely on single-dimensional service design or on the application of a single technology, and a systematic framework that integrates service experience, relationship management, AI marketing, and platform governance from a holistic health perspective has been lacking. Against this background, the present study is intended to construct, on the basis of holistic health theory, a comprehensive framework embracing service design, relationship management, technological application, and governance mechanisms, so that the gap in current research and practice may be addressed.

Literature Review

Holistic health constitutes a view of health in which the person is treated as an integrated body-mind-spirit-society entity. Health is regarded not as the mere absence of physical disease but as a dynamically balanced state of well-being across the physical, psychological, spiritual, and social levels. In contrast to the traditional biomedical model, which decomposes the person into organs, tissues, and cells, holistic health emphasises the integrity of the person and the mutual influence among its dimensions (Lu, 2026). Physical health is regarded as the foundation of holistic health and denotes the normal functioning of physiological systems, the absence of disease, the possession of capacity for activity, and the maintenance of sound habits. Traditional definitions of health have centred on the physiological level, encompassing indicators such as posture, blood pressure, heart rate, blood glucose, and blood lipids, together with health behaviours such as regular exercise, a balanced diet, and adequate sleep. In their large longitudinal study of ageing and well-being, Steptoe, Deaton, and Stone (2015) [11] demonstrated that physical health status is strongly associated with subjective well-being, cognitive function, and emotional stability; physical discomfort directly affects psychological state and willingness to participate socially, and physical health therefore functions as the vehicle and basis of holistic health. Conversely, psychological stress, social alienation, and spiritual emptiness may, through neuroendocrine pathways, affect physiological function, so that a bidirectional causal relationship is formed. Mental health denotes emotional stability, the capacity for stress regulation, cognitive function, and subjective well-being. In contrast to the earlier view of mental health as the absence of mental illness, the modern holistic framework places greater emphasis on the promotion of positive psychological dimensions, including stress adaptation, emotional awareness, self-acceptance, and life satisfaction. In their review of digital psychiatry, Torous *et al*. (2021) [13] observed that mental health acts as a key mediator connecting physical health with spiritual and social health: psychological state directly influences physical indicators as well as the individual's motivation for spiritual exploration and willingness to participate socially. Mild-to-moderate stress and emotional distress are the most prevalent health issues in modern society and constitute the principal motive for which most consumers seek healing services.

Spiritual health, the most inward dimension of holistic health, denotes the capacity to find meaning in life, to act in accordance with inner values, and to attain inner calm and transcendent experience. Distinguished from any particular religious belief, spiritual health has a more universal character and encompasses self-awareness, value identification, a sense of meaning, inner peace, and a sense of connection with nature or a higher order. In his long-term review of spirituality and health, Koenig (2012) [6] reported that spiritual health is significantly associated with physical and mental health: populations engaged in stable spiritual practice generally exhibit stronger capacity for stress coping, lower risk of depression, better recovery prognoses from illness, and higher life satisfaction. Spiritual health represents the core differentiated value that distinguishes healing services from general medical care, and it is a dimension to which contemporary consumers pay increasing attention; particularly at turning points in life or after crisis events, the intensity of spiritual needs rises markedly. Social health denotes the state in which the individual maintains satisfactory interpersonal relationships, a sense of belonging, and a social-support network, and participates appropriately in social interaction. In their meta-analytic review covering more than 300,000 participants, Holt-Lunstad, Smith, and Layton (2010) [4] confirmed that weak social relationships are associated with an approximately 50% higher risk of all-cause mortality, an effect comparable to established major behavioural risk factors and greater in magnitude than obesity or physical inactivity. Social health is not only an important dimension in itself; through the social-support network it also influences health behaviours, stress regulation, and access to resources, which in turn affect physical, psychological, and spiritual states. The alienation and loneliness of modern society are recognised as important contributors to civilisation-related illness, and they constitute a frequently neglected yet far-reaching dimension of demand within healing services (Lu, 2026).

A healing service may be defined as a generic term for interventions delivered at the physical, psychological, spiritual, or social level with the aim of promoting overall health and assisting recipients in restoring balance and raising their sense of well-being. Unlike medical services, which concentrate on the treatment of disease, healing services place greater emphasis on preventive care, holistic balance, and the enhancement of subjective well-being. Their forms are highly varied and include spa treatments, mindfulness meditation, yoga courses, music therapy, forest therapy, spiritual-growth workshops, and health consultation. With the rise of the experience economy, the core value of healing services has shifted from a functional orientation to an experiential one. Consumers purchase not only the functional benefit of the service itself but also the feelings, memories, and self-identification generated throughout the service process. In their study of well-being experience and retention in hospitality, Han, Yu, and Hyun (2020) found that consumer satisfaction with and retention in healing services depend not only on substantive effects but also on the experiential feelings, emotional connection,

and value identification encountered across the service journey. In other words, competition among healing services has been upgraded from "how well the function works" to "how good the experience is and how deeply the consumer identifies with it."

The quality of a service experience is determined by every touchpoint within the service journey. The service-blueprint (Service Blueprint) method proposed by Bitner, Ostrom, and Morgan (2008) [1] constitutes a classic tool for systematically designing and managing service experiences. Through visualisation, the blueprint depicts the complete service process from beginning to end, distinguishes the visible front-stage experience from the invisible back-stage operations, and marks every key touchpoint, failure point, and evidence point; it assists managers in optimising the service process from the customer's perspective and in improving the consistency and quality of the experience. For high-contact, high-experience healing services, the service blueprint constitutes the core method of experience design and management, enabling managers to perceive details and discontinuities that were previously overlooked and to optimise the experience systematically. Health services belong to a high-trust category, in which consumers are often unable to judge quality accurately before purchase; trust is therefore a key factor influencing consumer decisions. The decision process of health consumers typically passes through stages of needs awareness, information search, evaluation of alternatives, purchase decision, and post-purchase evaluation, each of which is affected by personal traits, social norms, brand image, and the credibility of information sources. Trust-building lies at the centre of healing-consumer behaviour and derives from several levels. The first is professional trust, which originates in the competence, certified qualifications, and proven outcomes of service personnel. The second is emotional trust, which originates in the care, empathy, and sincerity of those personnel. The third is brand trust, which originates in word of mouth, narrative, corporate image, and long-accumulated reputation. In his narrative-processing theory, Escalas (2004) [2] argued that brand narrative constitutes an important mechanism for establishing a consumer-brand connection: when consumers immerse themselves in a brand story and perceive a projection of themselves within it, identification and emotional trust are readily formed, and loyalty is consequently raised. This explains why healing brands attach particular importance to story marketing. Post-purchase evaluation, in turn, influences satisfaction, repurchase intention, and word-of-mouth recommendation. For high-experience services such as healing, post-purchase subjective feelings, perceived efficacy, and emotional response significantly affect customer lifetime value (CLV). Venkatesan and Kumar (2004) [14] observed that CLV is a core metric of customer-relationship management, and that firms should allocate marketing and service resources according to customers' value potential, raising loyalty and spending through personalised service so that long-term revenue may be maximised.

AI is profoundly reshaping the marketing and service industries. Kaplan and Haenlein (2019) [5] defined AI as the ability of a system to correctly interpret external data, to learn from it, and to achieve specific goals through flexible adaptation, and identified five application areas in marketing: customer insight, personalised recommendation, content generation, customer service, and process automation. At the level of customer insight, AI processes large volumes of behavioural, transactional, and unstructured data in order to identify segments with precision, forecast changes in demand, and detect churn risk, thereby assisting marketers in understanding customers more deeply. At the level of personalised recommendation, AI delivers customised recommendations of products, content, and services on the basis of individual preferences, historical behaviour, and present context, so that personalisation at scale may be realised and the high cost of earlier personalisation overcome. The emergence of generative AI has further extended the boundary of AI marketing. Meskó and Topol (2023) [8] observed that generative AI and LLMs hold broad application potential in healthcare, including clinical documentation, patient communication, health education, and summarisation of research, although these tools warrant a cautious, regulated approach. In marketing scenarios, generative AI may automatically produce personalised marketing copy, electronic mail, social posts, and video scripts for different segments, substantially raising the efficiency and variety of content output while maintaining a high degree of personalisation. At the level of customer service, AI-driven intelligent customer service and service bots are capable of handling common enquiries and standardised problems around the clock, improving service efficiency and reducing operational costs. On the basis of the literature reviewed above, it may be observed that holistic health theory, service-experience design, consumer behaviour, and AI marketing each possess a rich research base, yet three principal gaps remain. First, integration is insufficient: most studies examine single-dimensional health services or the application of a single AI technology, and a systematic framework integrating the four dimensions of healing services with AI marketing from a holistic perspective is lacking. Second, industrial specificity is limited: most AI-marketing studies address general consumer products, and discussion of the high-trust, high-experience healing-service sector is relatively sparse, so that the special requirements of healing services for trust, warmth, and privacy are overlooked. Third, governance discussion is incomplete: most studies emphasise the benefits of AI, while governance issues such as data governance, privacy protection, algorithmic ethics, and outcome evaluation are treated in a fragmentary manner without a systematic framework. The present study is intended to address these gaps.

The Healing-Service System and Needs Analysis from a Holistic Perspective

Contemporary healing needs have long transcended mere physical relaxation and encompass the holistic balance of body, mind, spirit, and society. Although demand structure differs markedly among consumers of varying age, gender, lifestyle, and health status, it may in aggregate be grouped into four levels, each of which may be further subdivided into demand types corresponding to diverse service formats. The physical level constitutes the most basic and universal healing need and the starting point at which most consumers encounter healing services; it may be divided into three types. The first is relief from fatigue and tension: in a high-pressure, sedentary, overworked lifestyle, stiff shoulders and neck, aching lower back, chronic fatigue, and poor sleep are common civilisation-related ailments, and passive physical

services such as massage, spa, essential-oil treatment, and hot-spring bathing are sought in order to release physical tension and fatigue. This type of need is the most concrete and the easiest for consumers to perceive and to act upon. The second is health promotion and posture management, encompassing weight control, body-toning, fitness improvement, and metabolic optimisation, which correspond to active interventions such as yoga, Pilates, aerobic exercise, and nutritional consultation; such needs usually carry clear goal orientation, and consumers are willing to invest additional time and effort. The third is sub-health conditioning: for pre-chronic conditions such as elevated blood pressure, abnormal glucose, or metabolic syndrome, diet therapy, traditional Chinese conditioning, and lifestyle adjustment are used to prevent disease and restore balance; such needs are usually generated by abnormal findings in health checks or by physician advice and carry stronger motivation for sustained investment. Although physical needs are the most concrete, they often serve as the entry point to healing services. Most consumers first encounter such services in order to resolve a specific physical discomfort, and only gradually extend their needs to the psychological and spiritual levels as the experience deepens. A consumer who begins yoga solely to relax the shoulder and neck may, during practice, gradually experience emotional calm and thereby develop deeper psychological and spiritual needs.

Psychological healing needs constitute the fastest-growing demand type in modern society and arise chiefly from emotional distress caused by high-pressure living. Three levels may be identified. The first is stress adaptation and emotional relaxation: accumulated pressure is released and emotional state regulated through mindfulness meditation, breathing exercises, music therapy, and art therapy. This is the most universal psychological need, covering a broad population from students to office workers, and its intensity rises with life pressure. The second is self-exploration and inner awareness: through guided meditation, writing therapy, and psychological consultation, consumers come to know their inner state, emotional patterns, and behavioural responses more deeply and raise their capacity for self-awareness; such needs typically appear at a stage of long-accumulated stress and confusion of self-identity, and consumers possess stronger motivation to explore further. The third is enhancement of well-being: rather than merely eliminating negative emotion, positive emotion, life satisfaction, and psychological resilience are actively raised and healthier mental models established. Unlike clinical psychotherapy, the psychological needs addressed by healing services are preventive and developmental in orientation, and recipients are generally members of the general public rather than clinical patients. Torous *et al.* (2021) [13] observed that mild-to-moderate stress and emotional distress constitute the most prevalent mental-health issues in modern society and the principal motive for which most consumers seek healing services. Unlike the high threshold of clinical treatment, the psychological interventions of healing services are characterised by high accessibility, strong confidentiality, and low stigma, and they therefore become the preferred choice of most people confronted with mild emotional distress.

Spiritual needs represent deeper healing motives and usually emerge at life turning points, after crisis events, or once material needs have been satisfied. Three common types may be identified. The first is exploration of meaning in life: when confronted with career transitions, bereavement, or mid-life crisis, consumers seek new meaning and direction. Such needs are usually generated by major life events and carry strong inner drive. The second is value clarification and self-actualisation: core values are reviewed, priorities in life and work are adjusted, and a lifestyle more consistent with inner values is pursued; such needs typically appear among consumers who have reached a stage in their careers and begin to reflect on life priorities. The third is transcendent experience and inner calm: through forest therapy, quiet meditation, and healing journeys removed from daily routine, experiences beyond the ordinary are obtained and inner stability found; this type of need emphasises departure from routine and pursues spiritual settlement and peace. The findings of Koenig (2012) [6] indicate that the satisfaction of spiritual needs is strongly associated with long-term life satisfaction and stress resilience. Although the urgency of spiritual needs is usually lower than that of physical and psychological needs, their influence on long-term well-being is more profound, and they represent the value dimension most prized by loyal healing consumers. When consumers begin to pursue spiritual fulfilment, they have usually already formed deep identification with the brand and become long-term loyal customers.

Social healing needs are frequently neglected yet constitute a key factor influencing health status. Holt-Lunstad *et al.* (2010) [4] demonstrated long ago that social isolation carries health harm comparable to major established risk factors, and that the alienation of modern society is an important contributor to civilisation-related illness. Social needs within healing services take several forms. The first is peer connection and belonging: in themed healing communities, peers with shared interests and similar circumstances are met, and a sense of belonging and support obtained, as in yoga communities, meditation groups, and mutual-aid groups for chronic illness. Because common interests and issues provide a basis, interpersonal connection arises naturally, and such communities represent an important channel for many modern people to extend their social circles. The second is relational healing: intimate, familial, or collegial relationships are improved through relationship workshops and communication courses. The third is voluntary service and altruistic experience: through giving and serving others, a sense of value and connection is obtained, which itself constitutes an important form of social healing. The four levels of need are not mutually independent but interwoven and mutually influential. Long-term stress, for example, simultaneously produces physical tension, emotional anxiety, and social withdrawal, while deep spiritual healing simultaneously brings psychological calm, physical relaxation, and interpersonal openness. Holistic-oriented healing services ought to perceive the integrity of needs and provide integrated services capable of satisfying several levels at once, rather than fragmented single services.

The consumer journey of healing services denotes the complete process from needs awareness to post-purchase experience. Unlike general commodities, healing services carry high-trust, high-experience, and high-participation attributes, and every touchpoint within the journey influences consumer trust and experiential feeling. A complete healing journey may be divided into five stages,

each with corresponding key touchpoints and trust-building tasks.

Stage 1: Needs awareness and information search

The journey begins when consumers become aware of a healing need, whether through physical fatigue, low mood, or loss of life balance, and begin to search for relevant service information. Key touchpoints at this stage include search-engine results, social-media content, recommendations from family and friends, the brand website and blog posts, and KOL sharing. The core task is to establish preliminary trust. Because healing services carry high experiential attributes and quality cannot be judged before purchase, word of mouth and the credibility of content are particularly important. Sincere, warm, resonant content and authentic user testimonials move consumers more readily than polished advertising. As Escalas (2004) [2] explained, brand stories capable of eliciting self-projection constitute an effective tool for connection at this stage: when consumers see their own reflection, similar troubles, and possible solutions in the story, preliminary identification and trust are formed and further enquiry is welcomed.

Stage 2: Evaluation of alternatives and purchase decision

Having gathered sufficient information, consumers compare alternative services across dimensions such as content, professionalism, price, location, environment, and brand image. Key touchpoints include service introductions from brand customer service, scheme consultation, the booking interface, pricing plans, visits to physical premises, and free trial sessions. The core task is to reinforce trust and reduce decision risk. Healing services usually require an investment of time and money, and their effects are subjective; consumers therefore perceive relatively high decision risk. Free trials, publicised credentials of instructors, transparent scheme explanations, and friendly consultation all effectively reduce anxiety and raise purchase intention. For high-priced long-term schemes, the free trial constitutes a critical conversion node, allowing consumers to experience quality under low risk and substantially raising the conversion rate.

Stage 3: On-site experience and service delivery

This stage forms the core of the journey, in which the consumer actually experiences the healing service. Key touchpoints are densely distributed and include reception, ambient atmosphere, staff interaction, service flow, course or treatment experience, and checkout. The core task is to create an immersive healing experience: from the moment the consumer enters the space, every sensory experience, personnel interaction, and service flow affects the overall healing feeling. The service-blueprint theory of Bitner *et al.* (2008) [1] emphasised that service experience resides in every detail, and that even back-stage process design indirectly affects the quality of the front-stage experience. For healing services, atmosphere, the empathy of personnel, and fluency of process are as important as the professionalism of the service itself. In line with the peak-end principle, memory of an experience is determined chiefly by the peak feeling and the feeling at its conclusion; healing services may therefore deliberately design experiential peaks, such as a moment of deep relaxation within a course, a surprising detail within a treatment, and a warm closing ritual, so that deep positive memory may be left behind.

Stage 4: Post-purchase follow-up and relationship maintenance

The end of service is not the terminus of the journey but the starting point of relationship management. Key touchpoints include post-purchase greetings, care for efficacy, health-education reminders, notifications of subsequent activities, member-only offers, seasonal greetings, and community interaction. The core task is to strengthen emotional connection and cultivate loyalty. Healing services carry high repeat-purchase potential, and a consumer who identifies with service value may become a long-term member. Continuous care and value delivery raise repurchase rate, strengthen emotional connection, and increase CLV. Many brands neglect the post-purchase phase and concentrate on acquiring new customers while overlooking the long-term value of existing ones; in practice, satisfied existing customers not only contribute stable revenue but also constitute the most effective word-of-mouth carriers who bring further high-quality new customers.

Stage 5: Word of mouth and crisis handling

When consumers are satisfied, they may recommend the service to family and friends or share the experience online, thereby becoming carriers of positive word of mouth; conversely, a poor experience or a controversy may generate negative word of mouth or even a brand crisis. Key touchpoints at this stage include review platforms, social sharing, personal recommendations, and complaint handling. The core task is to manage word of mouth and handle crises properly. Good word of mouth is the most valuable marketing asset of healing services, while appropriate crisis handling prevents the expansion of adverse events and may even transform a crisis into an opportunity. Authentic user sharing carries greater persuasiveness than any advertisement, and the encouragement of positive word of mouth together with the proper handling of negative opinion constitutes the focus of this stage.

Faced with diverse and heterogeneous healing needs, personalisation has become the core principle of healing-service design. Relative to standardised packaged services, personalised services designed on the basis of individual physical state, psychological state, values, and lifestyle produce not only better healing effects but also higher satisfaction and loyalty. The design of personalised healing services ought to follow four principles. First, holistic assessment as the basis: the premise of personalised design is a complete assessment of the individual's overall state rather than reliance on a single indicator. Second, progressive adjustment: healing is a dynamic process, and individual state changes over time, so a personalised scheme ought not to be static but progressive and adjustable. Third, autonomous participation and co-creation: personalised service is not a one-way model in which the provider gives and the consumer passively receives, but a process of co-creation by both parties. Fourth, holistic-oriented integration: personalisation ought not to be single-dimensional but a holistic-oriented integrated design. The service blueprint constitutes the core tool for systematically managing the healing experience. Through a visual flow

diagram, every link of the journey is decomposed into layers, and key touchpoints, failure points, and quality-control points are identified. Bitner *et al.* (2008) [1] emphasised that the greatest value of the blueprint lies in compelling managers to re-examine the service process from the customer's perspective and to perceive previously overlooked details and discontinuities. A complete healing-service blueprint may, from top to bottom, be divided into four layers. The first is the customer-behaviour layer, which depicts every behavioural step of the customer across the journey, from needs awareness and information search through booking, arrival, service experience, departure, and post-purchase interaction. The second is the front-stage contact layer, which depicts the visible behaviours of front-stage personnel, including receptionists, consultants, instructors, and therapists who interact directly with customers. The third is the back-stage support layer, which depicts invisible back-stage operations, including the functioning of the booking system, environmental preparation, personnel training, inventory management, and administrative work that supports the front stage. The fourth is the support-process layer, which comprises, at the bottom, institutional rules, information systems, supply chains, and quality management. Through the blueprint, managers may clearly observe the front- and back-stage operations corresponding to every customer touchpoint and identify experiential discontinuities, high-risk failure points, and over-complex processes, which may then be optimised. If, for example, the booking process is found to be excessively cumbersome, steps may be simplified and an AI booking assistant introduced; if a lack of post-course follow-up is found to depress repurchase rate, a post-purchase care mechanism and personalised follow-up recommendations may be designed. Experience management consists not only in eliminating negative failure points but also in actively designing positive experiential peaks: in accordance with the peak-end principle, memory is determined chiefly by the peak and conclusion, and deliberate design of deep-relaxation moments, surprising details, and warm closing rituals raises overall experiential evaluation.

Customer Relationship Management and Brand Strategy for Healing Services

Customer relationship management (CRM) constitutes the core operating mechanism of the healing-service industry. Unlike low-involvement fast-moving consumer goods, healing services are characterised by high repeat-purchase potential, high customer loyalty, and high customer lifetime value (CLV). Sound relationship management not only raises revenue but also attracts new customers through member word of mouth, thereby forming a virtuous circle. Venkatesan and Kumar (2004) [14] observed that CLV is the core metric of CRM: resources ought to be allocated according to customers' value potential rather than distributed evenly across marketing and service activities.

A complete CRM system for healing services ought to possess four core functions. First, customer-data management: data from every customer touchpoint—basic information, service records, consumption history, behavioural traces, satisfaction feedback, and health-status monitoring—are integrated so that a single complete customer profile may be formed, replacing the past dispersion of data across independent booking, membership, and counter systems with a 360-degree view that also incorporates qualitative health feedback and satisfaction, so that each customer may be represented in a three-dimensional manner. Second, segmentation and value assessment: customers are segmented and evaluated across dimensions such as spending, frequency, loyalty, growth potential, and health status, and are classified into high-value, growth, marginal, and at-risk-of-churn groups, each corresponding to a management strategy—premium service and exclusive offers for high-value customers, proactive approach and return incentives for at-risk customers, and entry schemes and cultivation mechanisms for new customers—so that limited service resources are allocated in priority to high-value and high-potential customers and return on investment is maximised. Third, personalised service and marketing: personalised service suggestions, activity notifications, and marketing content are delivered on the basis of each customer's attributes, preferences, consumption behaviour, and health status—relaxation programmes and sleep-education courses may be recommended proactively to customers with sleep difficulties, and recurring-booking reminders together with regular-customer offers sent to periodic massage customers—which not only raises response and conversion rates but also makes customers feel understood and valued, thereby strengthening the emotional connection. Fourth, relationship-lifecycle management: different strategies are applied across the complete lifecycle from first awareness of the brand, first purchase, and regular use to loyal membership and possible churn—lowering the threshold to the first experience and establishing trust in the new-customer phase, broadening the scope of service and deepening the emotional connection in the active-customer phase, and approaching the customer proactively, investigating the causes of dissatisfaction, and offering recovery schemes at the appropriate time in the early-warning phase.

The ultimate objective of CRM is the maximisation of CLV, that is, the total net revenue brought by the customer throughout the relationship lifecycle. In healing services, loyal long-term members contribute stable revenue in their own right and act as the most effective word-of-mouth carriers who attract further high-quality customers; their long-term value far exceeds that of one-off purchasers. The core thinking of CRM is therefore not to profit from the customer once, but to build a long-term relationship of trust with the customer and to grow together.

The membership scheme is the most common vehicle of relationship management in the healing-service sector. A well-designed membership system not only raises loyalty and retention but also stabilises cash flow, collects member data, and strengthens community connection. Its design ought to balance three levels: substantive benefits, emotional value, and community belonging. Membership systems commonly offer graded benefits according to membership level, including spending discounts, priority booking, exclusive services, free trials, and birthday privileges. Advancement through levels is usually tied to spending, accumulated points, or activity level, which guides members to increase frequency and spend. The design of benefits ought to ensure that higher levels carry a clearly perceptible sense of prestige and value, so that advancement feels worthwhile. Beyond price discounts, non-price benefits such as exclusive content, booking priority, and a personal health adviser are often more

effective in strengthening identification among premium members. Beyond substantive offers, emotional value ought to be cultivated. Exclusive member events, limited member content, and a sense of participation in the brand's growth make members feel that they are not merely paying consumers but members of a brand community. This point is especially important for healing brands that emphasise shared values: when members identify with the brand's philosophy, loyalty far exceeds that retained through offers alone. Many brands fall into the trap of discount-led membership management and overlook the fact that emotional identification is the core of long-term loyalty.

In an age of information overload, functional appeals alone are insufficient to capture consumer attention or to establish differentiation. Story marketing constitutes a key strategy by which healing brands may create differentiation and emotional connection. In his narrative-processing theory, Escalas (2004) [2] observed that consumers do not memorise cold functional parameters when processing brand information but construct a narrative about the brand; when the brand story elicits self-projection, a consumer-brand connection is formed, and identification and trust follow. Every healing brand carries an origin story and founding philosophy, and a sincere founding story is the first step in establishing brand identity. Authentic, warm, and resonant origin narratives — for example, a founder who entered healing after a personal health crisis, or who was moved by the suffering of people nearby — rapidly narrow the distance between brand and consumer and make the consumer feel that "this brand understands me." The origin story is also an important component of brand personality and determines how the brand is perceived. Compared with a perfectly packaged image, a real, life-warmed founding story is more likely to elicit resonance and trust. Authentic stories of user transformation constitute the most persuasive marketing content: an office worker who learned to live with stress after attending a course, a middle-aged person whose sleep improved through healing adjustment, or an isolated older adult who found belonging in the community. Real life stories carry greater force than any advertising copy, because potential consumers see people resembling themselves, perceive the possibility of change, and thereby develop trust and intention to act. User stories are also the core carriers of word of mouth: when consumers identify with a brand, they naturally share their own stories with people nearby, and organic diffusion follows. What a healing brand sells is not only a service but a lifestyle. Through content marketing, the life attitude and values endorsed by the brand — slow living, awareness, self-care, and mind-body balance — are conveyed, and the brand is woven into daily life. When consumers identify with the lifestyle conveyed, the brand ceases to be a mere service provider and becomes a symbol of life identification; such identification brings stronger loyalty and a sharper brand identity.

The foremost principle of story marketing is sincerity. Trust is the core of healing services, and over-packaging or false marketing produces the opposite effect and damages reputation. Only authentic, earnest, and warm stories genuinely move people and establish lasting trust. Trust constitutes the core asset of healing services. Its accumulation requires a long period, yet a single crisis event may destroy it. Common brand crises include service disputes, consumer injury, false-advertising controversies, data breaches, and the spread of negative word of mouth. Because healing services are closely associated with health and mind-body issues, crisis events readily attract intense negative attention and cause disproportionate damage. CRM constitutes the core operating mechanism of the healing-service industry. Long-term trust and identification are built through CRM systems, membership schemes, and story marketing, while reputation is protected by a sound crisis mechanism. In contrast to transaction-oriented management, relationship management in healing services emphasises long-term trust-building, value identification, and community connection, and ultimately achieves the maximisation of CLV and the sustainable development of the brand.

AI Marketing and Innovative Applications in Healing Services

The maturation of AI technology has brought a qualitative improvement to CRM and marketing decisions. Earlier segmentation relied on experiential judgement and simple RFM models, with limited dimensions and slow updating, which made dynamic change difficult to reflect. Contemporary AI-driven customer analysis processes large volumes of heterogeneous data and performs finer, more dynamic, and more accurate segmentation and needs forecasting, thereby forming the basis of precision marketing and personalised service. Kaplan and Haenlein (2019) [5] observed that customer insight is among the core application values of AI in marketing. AI applications in customer analysis and needs forecasting comprise four principal areas. First, multi-dimensional segmentation: AI integrates structured transactional and behavioural data with unstructured material such as service conversations, satisfaction feedback, and social-media posts, automatically extracting features from hundreds of variables for finer segmentation. Beyond conventional spending and frequency, it identifies detailed labels such as preference type, emotional tendency, health status, and churn risk, and builds a three-dimensional customer profile—for example, distinguishing among high-spending customers between "premium-experience seekers," "practical-effect buyers," and "socially active influencers," each corresponding to a different marketing and service strategy. Compared with rule-based segmentation, AI discovers latent segments and reveals customer types and needs previously overlooked. Second, dynamic needs forecasting: on the basis of historical consumption, seasonality, festive effects, campaign impact, and lifecycle stage, AI forecasts future changes in demand, including overall service volume, sales trends across service types, and the timing of individual purchases; unlike traditional time-series methods, AI models incorporate more variables and capture complex non-linear patterns, which raises forecast accuracy and assists campaign planning, staffing, inventory, and operations. Third, churn-risk detection: from behavioural traces, AI identifies early warning signs such as declining frequency, delayed bookings, negative service feedback, and reduced email open rates, and issues advance alerts; the system may then map churn-risk level and customer value to recovery strategies, with high-value, high-risk customers receiving proactive personal contact and lower-risk customers receiving personalised offers, so that prevention substantially raises recovery rate and reduces churn cost compared with post-event remediation. Fourth, lifetime-

value estimation: AI estimates each customer's CLV potential more accurately, assisting managers in allocating limited marketing and service resources in priority to high-potential customers and maximising return on investment; whereas traditional CLV calculation, as described by Venkatesan and Kumar (2004) [14], relied largely on historical transaction data, contemporary AI models may incorporate additional behavioural, attitudinal, and social-network variables, which substantially raises predictive accuracy. The value of AI customer analysis lies not in producing complex data reports but in driving concrete action: fine-grained segmentation and labels must ultimately correspond to personalised marketing content, service design, and care mechanisms if commercial value is to be created.

The rise of generative AI is among the most significant recent changes in marketing. Earlier content production depended on human writing, design, and filming, with limited output and high cost, which made large-scale personalisation difficult; generative AI automatically produces diverse marketing content for different audiences, scenarios, and communication objectives, thereby achieving personalisation and scale simultaneously. Meskó and Topol (2023) [8] observed that generative AI and LLMs hold substantial potential in healthcare-related content generation and communication, including health education, patient communication, and clinical documentation, although their deployment requires regulatory oversight and human review. Customer service is an important component of the healing experience: from booking enquiry to after-sales care and problem resolution, every interaction affects customer feeling and brand trust. Traditional human customer service suffers from high cost, limited hours, inconsistent quality, and congestion at peak times; AI-driven intelligent service addresses these pain points while preserving a degree of warmth. Three forms of application may be identified. The first is the automation of common enquiries: standardised enquiries—frequently asked questions, booking procedures, service introductions, membership benefits, and location and transport—are handled by the AI assistant, which responds around the clock and assists with standard operations such as booking, enquiry, and modification. Such questions typically account for more than seventy per cent of service volume; automation substantially reduces the human workload, shortens waiting time, and prevents loss from unanswered simple enquiries during off-peak periods. The second is intelligent triage and assistance: for more complex questions, the AI performs preliminary judgement and collects basic information before routing the issue to the appropriate specialist, so that human staff need not spend time on information collection and may proceed directly to the core problem, which raises efficiency, reduces repeated explanation, and improves the service experience. The third is the AI brand ambassador or virtual healing guide: an advanced application is a brand-specific AI ambassador—a virtual health adviser or healing guide—that answers questions, offers basic health suggestions, leads simple relaxation exercises, and acts as a daily health reminder. This application extends beyond traditional customer service to become part of the brand experience and widens the reach and frequency of the service; a member may, for example, report the day's state to an AI health assistant and receive small personalised suggestions, which strengthen the daily connection with the brand.

The foremost design principle of intelligent customer service is "warmth together with efficiency." Healing services emphasise empathy, care, and warmth, so that service bots must not be mechanical or cold but should possess a consistent brand personality with a gentle, empathetic, and courteous tone. Users must also be clearly informed which service is provided by AI and which by a human; AI must not be presented as human, because such concealment damages trust. When AI handles approximately seventy per cent of standardised questions, human staff may devote more time and effort to complex problems requiring high empathy and professional expertise, and the overall experience may improve on the fully human model. AI may be applied not only at the marketing and customer-service end but also within the service process itself, assisting in the optimisation of the entire healing journey and raising experiential quality and personalisation. Combined with the service-blueprint architecture (Bitner *et al*., 2008) [1], AI may add supportive value at each stage of the journey. At booking or initial consultation, AI may use the health state, preferences, and past records supplied by the customer to recommend a suitable scheme, intensity level, and precautions for the staff member's reference; the staff member then adjusts the recommendation on the basis of actual interaction, which shortens assessment time, reduces oversight, and raises personalisation. During service, AI may assist in monitoring objective physiological data (such as heart rate and respiratory rate, where a wearable device is available) and remind staff to adjust pace and intensity; if, for example, an excessively rapid heart rate or high muscle tension is detected, the treatment intensity may be reduced and relaxation steps increased. As a supportive tool, such applications raise precision and safety. After service, AI automatically generates personalised post-treatment maintenance advice, home-practice guidance, and efficacy-tracking reminders on the basis of the session and the customer's state: following a stress-relief massage, corresponding home stretches and sleep advice may be sent; after a meditation course, daily-practice reminders and guided audio may follow. Continuous post-service tracking extends the healing effect and strengthens the connection between customer and brand. By aggregating feedback and behavioural data from large numbers of customers, AI may analyse pain points and peaks across the journey, identify experiential discontinuities and key satisfaction factors, and provide a basis for process optimisation: if, for example, analysis shows that a cumbersome booking flow is the largest pain point, booking steps may be simplified; if post-course greetings are found to raise satisfaction substantially, that element may be strengthened. It must be emphasised that, in healing services, AI always occupies a supporting role and cannot replace the professional judgement and humanistic care of staff. Its value lies in handling standardised, repetitive, data-oriented work, thereby releasing staff time and energy for the core service moments that require empathy, intuition, and interpersonal connection. The ideal state is that AI handles efficiency while humans handle warmth, and that the two complement one another to improve the overall experience. Artificial intelligence is profoundly reshaping the marketing and service models of healing services. From segmentation and needs forecasting through generative content, intelligent customer service, and journey optimisation, AI brings value that was previously difficult to attain in efficiency,

personalisation, and experience. Because the core of healing services is trust and warmth, AI applications must nevertheless be human-centred, preserve human oversight, and balance efficiency against warmth if genuine rather than eroded value is to be added.

The Integrated Holistic Health Platform and Governance Mechanisms

A single healing service or a single functional application creates limited value; an integrated holistic platform combining the four dimensions of body, mind, spirit, and society creates greater synergy and ecosystem value. The platform is not a simple service-selling website but an integrated service ecosystem that brings together multiple providers, health data, AI tools, and community mechanisms. Four feasible business models may be identified for different target segments and operating bodies.

Model 1: B2C subscription membership: Subscription-based holistic services are offered directly to end consumers, including online courses, health assessment, personalised advice, community participation, and discounts on physical services, with a monthly or annual fee. Its advantage is direct control of the customer relationship and stable revenue; its disadvantage is high customer-acquisition cost and the requirement for continuous content and service production. It suits operators with brand strength and a stable capacity to produce content.

Model 2: B2B2C employee-benefit scheme: In cooperation with employers, holistic health services are provided as an employee-benefit package, supporting stress management, mental-health promotion, and health-risk prevention, with the enterprise paying the scheme fee. Modern enterprises pay growing attention to employee well-being, and employee assistance programmes (EAPs) have expanded from traditional crisis handling to preventive holistic promotion; demand in this market is growing rapidly. The model carries a high unit price, low acquisition cost, and stable volume, and suits a principal enterprise-side revenue stream.

Model 3: Value-added service to medical or long-term-care systems: In cooperation with hospitals and long-term-care institutions, integrated mind-body-spirit healing services are offered as value-added items for disease prevention, post-operative recovery, and long-term care, supporting health outcomes and quality of life. As the holistic concept spreads, medical systems pay increasing attention to non-pharmacological healing interventions as adjunctive treatment. This model requires medical endorsement and carries a high entry threshold, but once established it offers high stability and clinically validated value.

Model 4: Ecosystem platform model: As an open platform, third-party healing providers, content creators, and health-technology tools are integrated into a one-stop ecosystem, from which the platform earns transaction commissions, service fees, and membership fees. This model carries the greatest long-term value and network effects but the highest operational complexity; it requires a critical mass before benefits materialise and suits well-resourced operators with integration capability.Regardless of business model, the core competitiveness of a holistic platform lies in integrative value: consumers need not switch between different services and systems, but obtain comprehensive body-mind-spirit-society services, continuous health data, and personalised advice within a single platform, thereby experiencing a synergy greater than the sum of its parts. This is the foundational rationale for the platform model.

The maturation of LLMs allows a holistic platform to deploy an intelligent health-education assistant as a standard feature, extending service capacity and improving accessibility. Torous *et al*. (2021) [13] observed that digital tools possess substantial application potential as instruments of mental-health education and primary intervention, addressing shortages of professional staff and limited service access. Several core application scenarios may be identified for a holistic-oriented LLM health assistant. Common questions across physical, mental, spiritual, and social health are answered with accurate, accessible health knowledge, and prevalent health myths are corrected. Basic education on questions such as "How may poor sleep be managed?", "How may family communication be improved?", and "How should a beginner start meditation?" may be supplied by the assistant, which reduces the burden of repetitive standard questions on professional staff. The diffusion of such basic education also raises public health literacy and supports self-management. On the basis of the user's health data, lifestyle, and goals, personalised life suggestions, activity recommendations, and small task challenges are offered: relaxation exercises and routine adjustments are recommended according to sleep data and stress index; community participation is recommended according to social activity. Small, stepwise personalised suggestions are more readily implemented than generic education and more likely to produce tangible change. As a first-line channel for emotional expression, the assistant receives the user's emotions with empathy and responds with appropriate coping suggestions. For mild emotional distress, listening and empathy alone bring relief; when more serious negative affect or self-harm risk is detected, referral to professional psychological resources is made without delay. Four principles must be observed in design. First, the boundary is made explicit: the assistant is clearly presented as a health-education tool, not a medical diagnosis or psychotherapy service, and cannot replace professional clinicians. Second, content is rigorous and accurate: health information must be professionally reviewed to prevent erroneous medical advice. Third, a referral mechanism is established: a clear red-flag detection system triggers immediate referral when serious health risk, psychological crisis, or self-harm risk is identified. Fourth, privacy is prioritised: health conversations are highly sensitive, so that privacy protection and the principle of data minimisation are applied from the outset.

The foundational value of the holistic platform lies in the integration of multi-source health data. User data are dispersed across devices, services, and systems: physiological metrics from wearables, activity records from exercise courses, service records from physical treatments, questionnaire results from psychological assessment, and participation records from community activities. Only when these heterogeneous, dispersed data are integrated into a coherent and complete holistic health record may genuinely personalised holistic advice be offered. The integration

architecture follows the principles of unified standards and modular expansion. Four common data-source categories may be identified: physiological data (heart rate, HRV, blood pressure, blood glucose, sleep, and steps from wearables, together with body-measurement and laboratory data); service records (participation, content, and efficacy feedback across treatments, courses, and consultations); psycho-spiritual data (psychological assessment, stress scores, emotional records, spiritual-practice records, and values assessment); and social-participation data (community attendance, social-connection indicators, belonging scores, and interpersonal-relationship assessment). Standardisation is the key to integration: unified field definitions, coding standards, and interface specifications enable data from different sources to be mapped, compared, and combined. Data quality forms the basis of all analysis and application, and "garbage in, garbage out" is the most common trap in health-data use. In their study of electronic-health-record data-quality assessment, Weiskopf and Weng (2013) [15] proposed five quality dimensions, which are equally applicable to platform data management. Completeness refers to whether data that ought to be present are complete and whether values are missing; intermittent records and absent fields from different sources are common completeness problems. Correctness concerns the degree to which recorded values agree with the true state; wearable error, response mistakes, and system anomalies may all affect correctness. Concordance examines whether synonymous data from different sources agree, and whether the same indicator carries consistent definitions and units across systems. Plausibility asks whether values are internally coherent and fall within physiologically reasonable ranges; implausible readings are flagged for review. Currency concerns whether data are updated promptly and reflect the most recent state. Routine quality monitoring—periodic checks of quality indicators, automated anomaly detection, and data cleaning and correction—forms the foundational work of long-term platform operation. Only stable, high-quality data render subsequent analysis, forecasting, and personalised advice meaningful.

Holistic health data contain large quantities of sensitive physiological, psychological, spiritual, and social information and constitute highly private personal data; privacy protection and data security are therefore the first priority of platform governance. In their study of algorithmic ethics, Mittelstadt *et al*. (2016) [9] emphasised that data processing in health must follow the principles of privacy, transparency, and accountability, and that user privacy must not be sacrificed for service optimisation. Four core principles govern privacy and security governance. Only data genuinely required by a service function are collected, and redundant collection is avoided. After the user's purpose has been achieved, data are deleted or anonymised according to policy, so that the scale of sensitive data held is reduced from the outset. Privacy protection is built into the architecture rather than added afterwards; privacy settings adopt the most protective default, and the user retains control over what is collected, shared, and deleted. Consent mechanisms must be clear and informed, and sensitive special-category data require explicit separate authorisation. End-to-end encryption, access control, audit logging, and regular security review protect data in transit and at rest; permission levels are restricted to what each role requires, and data breaches are monitored proactively. For continuous processing, an edge-cloud architecture is well suited to health settings: most computation and processing are executed on the user's terminal or local edge node, while only necessary, de-identified data are transmitted to the cloud (Sun *et al*., 2020) [12], which reduces exposure of raw sensitive information. Processing purposes, categories, and sharing arrangements are communicated transparently to users; algorithms are explainable where they affect individuals; a designated responsibility structure and an incident-response plan are maintained, in line with the transparency and accountability principles identified by Mittelstadt *et al*. (2016) [9].

Conclusions

This study has examined healing services and AI marketing from a holistic health perspective, integrating four dimensions of body, mind, spirit, and society into a coherent framework of experience design, relationship management, technological application, and governance. It has been found that contemporary healing needs extend beyond physical relaxation to holistic balance; that the service journey carries key touchpoints at every stage, each requiring a distinct trust-building task; that CRM, membership, and story marketing establish long-term identification rather than relying on discounts; and that AI assists segmentation, forecasting, content generation, service, and journey optimisation without replacing human empathy (Lu, 2026). At the platform level, the study has set out four business models, the design principles of an LLM health-education assistant, a five-dimension data-quality framework, and a privacy-and-security governance architecture centred on minimisation, security by design, and accountability. Throughout, AI has been treated as a supporting tool: the core of healing services remains trust, warmth, and human judgement, and technology must always be human-centred, transparently governed, and held under human review (OpenAI, 2026) [10]. The present study is a conceptual framework rather than an empirical validation; future research may test the proposed mechanisms through quantitative surveys, case studies, or controlled trials, particularly concerning the effectiveness of AI-assisted personalisation on satisfaction, retention, and health outcomes, and concerning user trust in LLM health assistants under different disclosure and oversight conditions.

References

1. Bitner MJ, Ostrom AL, Morgan FN. Service blueprinting: A practical technique for service innovation. California Management Review,2008:50(3):66–94. https://doi.org/10.2307/41166446
2. Escalas JE. Narrative processing: Building consumer connections to brands. Journal of Consumer Psychology,2004:14(1–2):168–180. https://doi.org/10.1207/s15327663jcp1401&2_19
3. Han H, Yu J, Hyun SS. Nature based solutions and customer retention strategy: Eliciting customer well-being experiences and self-rated mental health. International Journal of Hospitality Management,2020:86: Article 102446. https://doi.org/10.1016/j.ijhm.2019.102446

4. Holt-Lunstad J, Smith TB, Layton JB. Social relationships and mortality risk: A meta-analytic review. PLoS Medicine,2010:7(7):Article e1000316. https://doi.org/10.1371/journal.pmed.1000316
5. Kaplan AM, Haenlein M. Siri, Siri, in my hand: Who's the fairest in the land? On the interpretations, illustrations, and implications of artificial intelligence. Business Horizons,2019:62(1):15–25. https://doi.org/10.1016/j.bushor.2018.08.004
6. Koenig HG. Religion, spirituality, and health: The research and clinical implications. ISRN Psychiatry,2012:2012:Article 278730, 1–33. https://doi.org/10.5402/2012/278730
7. Lu L. The history of Western holistic health development. AkiNik Publications, 2026.
8. Meskó B, Topol EJ. The imperative for regulatory oversight of large language models (or generative AI) in healthcare. npj Digital Medicine,2023:6:Article 873. https://doi.org/10.1038/s41746-023-00873-0
9. Mittelstadt BD, Allo P, Taddeo M, Wachter S, Floridi L. The ethics of algorithms: Mapping the debate. Big Data & Society,2016:3(2):Article 2053951716679679. https://doi.org/10.1177/2053951716679679
10. OpenAI. ChatGPT (GPT 5.6) [Large language model], 2026. https://chatgpt.com/
11. Steptoe A, Deaton A, Stone AA. Subjective wellbeing, health, and ageing. The Lancet,2015:385(9968):640–648. https://doi.org/10.1016/S0140-6736(13)61489-0
12. Sun L, Jiang X, Ren H, Guo Y. Edge-cloud computing and artificial intelligence in Internet of Medical Things: Architecture, technology and application. IEEE Access,2020:8:101079–101092. https://doi.org/10.1109/ACCESS.2020.2997831
13. Torous J, Bucci S, Bell IH, Kessing LV, Faurholt-Jepsen M, Whelan P, *et al*. The growing field of digital psychiatry: Current evidence and the future of apps, social media, chatbots, and virtual reality. World Psychiatry,2021:20(3):318–335. https://doi.org/10.1002/wps.20883
14. Venkatesan R, Kumar V. A customer lifetime value framework for customer selection and resource allocation strategy. Journal of Marketing,2004:68(4):106–125. https://doi.org/10.1509/jmkg.68.4.106.42728
15. Weiskopf NG, Weng C. Methods and dimensions of electronic health record data quality assessment: Enabling reuse for clinical research. Journal of the American Medical Informatics Association,2013:20(1):144–151. https://doi.org/10.1136/amiajnl-2011-000681