

# Research on the Influence Mechanism of Public Space Art Design in Hospitals on Doctor-Patient Sentiment and Medical-Related Behaviors

Simeng Gao

Luoyang Vocational College of Science and Technology, Luoyang 471822, Henan, China

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**Abstract:** Against the backdrop of continuous upgrading of modern medical service frameworks, human-oriented environmental construction has gradually become a vital assessment benchmark for measuring the comprehensive service capacity of medical institutions. The notion of environment-assisted healing has been incorporated into the full-cycle architectural and interior renovation of hospital buildings. Designers no longer merely prioritize practical spatial layouts. Instead, they strive to strike a balance between tangible spatial usability and the subjective psychological experience of every hospital visitor. This research takes artistic layout schemes for hospital communal zones as the research carrier and explores how environmental art interventions reshape emotional states and daily behavioral habits among medical staff and patients. Four primary influence channels are summarized: mood regulation, behavioral habit optimization, mindset reconstruction, and improved doctor-patient rapport. Targeted countermeasures are put forward, covering structured visual healing layouts, upgraded signage and navigation frameworks, local-featured scene construction, and multi-use communal zones conducive to doctor-patient exchanges. The research outcomes intend to furnish practical theoretical references and operable design suggestions for human-centered hospital space renovation, and raise the humanistic standard of modern medical environments.

**Keywords:** Hospital public space; Environmental art-oriented layout; Doctorpatient sentiment; Medicalrelated behavior; Environmentalhealing theory

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## 1. Introduction

The widespread popularization of the biopsychosocial medical model has overturned conventional hospital design thinking, which valued practical functions above everything else. Contemporary medical facilities undertake far more responsibilities than disease diagnosis and clinical treatment. They deliver psychological comfort, humanistic care, and auxiliary rehabilitation services for sick individuals. As the most-frequently-accessed communal zones within medical buildings, hospital public spaces shape patients'

visiting experience and front-line workers' working atmosphere, and then impose subtle impacts on the operating efficiency of medical services. Most domestic hospitals still adopt old-fashioned space-design logic that puts functionality first. Insufficient attention is paid to environmental aesthetics and humanistic atmosphere building. Drab color collocations and stiff spatial frameworks easily trigger anxiety, panic, and irritability in patients and accompanying relatives. Besides, the environmental comfort demands of medical practitioners tend to get overlooked. Accordingly, studying the operating principle and implementation paths of artistic hospital-space renovation carries theoretical value and practical significance. This paper supplements existing theories on humanized medical environment planning and works to elevate the overall visiting experience for both medical personnel and patients.

## **2. Core value brought by artistic design to hospital publicspace construction**

Norbert Schulz, a well-known Norwegian architectural theorist, advanced the theory of genius loci. He held the view that architectural space bears two-tier values: basic practical functions and intangible spiritualcultural implications. When it comes to hospital public zones, the primary merit of artistic planning lies in environmental healing effects. Carefully planned visual aesthetics and ambient settings ease patients' negative feelings and speed up psychological recovery. Ordinary function-oriented hospital areas can therefore be transformed into composite venues for treatment and mental relaxation. Humanistic care constitutes the second core value. Delicate art-based environmental layouts convey respect to every hospital user, remove the stereotyped cold impression of medical scenarios, and build welcoming, inclusive hospital surroundings. Apart from that, cultural identity serves as a supporting value. Hospital public art acts as the carrier for local cultural inheritance. Designers can embed regional characteristics and institutional spirits into space construction. Visitors will gain stronger spatial belonging and cultural recognition, which endows modern hospital communal areas with deeprooted cultural charm <sup>[1]</sup>.

## **3. How hospital-public-space art design acts on doctor-patient sentiment and medical-related behaviors**

### **3.1. Emotion-adjusting channel: Relieve negative feelings and stimulate positive mentality**

#### **3.1.1. Physical and mental regulation from color matching**

Relevant color-psychology studies confirm that light signals from different colors stimulate human autonomic nerves via visual perception, adjust endocrine secretion, and change people's emotional tendencies and physical indicators. Low-saturation pale blue and light green suit high-flow areas such as outpatient halls and waiting zones. Soft-toned settings restrain excessive sympathetic-nerve excitement, stabilize heart rate and blood pressure, and ease waiting-time anxiety. Warm colors including pale pink and beige fit obstetric, gynecological and pediatric zones, as they mitigate children's and puerperal women's fear over examinations and operations. Designers ought to avoid large-scale high-saturation color deployment, which causes visual fatigue. Soft furnishings, custom-made furniture and decorative paintings can realize gentle color transitions and guarantee visual comfort.

#### **3.1.2. Moodboosting effects created by light-shadow conditions**

Natural daylight regulates human biological rhythms and mental conditions. Light signals travel through the

retinohypothalamic pathway towards the suprachiasmatic nucleus, adjust melatonin and cortisol secretion cycles, and control physiological fluctuations and mood shifts. Rehabilitation medicine research has validated such regulatory effects. During hospital layout, skylights, side windows, and light wells are reasonably arranged inside corridors, waiting halls, and rest corners for adequate natural daylight. Well-lit waiting spaces improve patients' experience and shorten rehabilitation cycles. For man-made lighting, designers need to balance practical usability and visual comfort. Indirect and diffused lighting prevents glare. Adjustable color-temperature lighting can be adopted: neutral cool-toned light keeps spaces sharp during daytime, while warm soft lighting accommodates human rest cycles and builds quiet resting environments after dark <sup>[2]</sup>.

### **3.1.3. Soothing functions delivered by public art installations**

Distraction therapy helps people escape bad moods by switching visual attention away from unpleasant stimuli. Murals, threedimensional sculptures and scene-based artwork inside hospital zones achieve identical intervention outcomes. While waiting for diagnosis, patients can appreciate art installations and divert attention away from bodily soreness and inner anxiety. Works themed on mountains, water, vegetation, and blossoms are more likely to inspire pleasant associations and facilitate physical and mental relaxation. Designers should pick artwork with high public acceptability. Excessively abstract, hard-to-interpret art pieces get ruled out. Elegant, lively nature-themed works fit the psychological traits of hospital visitors.

## **3.2. Behavior-guiding channel: Optimize spatial circulation and upgrade medical-service experience**

### **3.2.1. Navigation value of color coding and signage systems**

Human visual-search efficiency rises when obvious color contrast exists between target markers and background settings. Color-coded navigation cuts down visitors' spatial-search cost within complicated hospital functional zones. Hospitals have numerous departments and tangled passageways, which frequently confuse patients and accompanying family members. Designers can assign exclusive representative colors for different functional partitions: blue for internal-medicine sections, green for surgical zones, and purple for laboratory-examination departments. Visitors identify functional partitions rapidly according to wall and floor color features on each floor. Signage color and styling should coordinate with overall environmental tones. Sufficient text-background contrast guarantees readability. With ergonomic standards taken into account, installation height and viewing distance suit both standing and seated readers.

### **3.2.2. Spatial atmosphere's impacts on visitor behavior tendency**

Ambient characteristics decide visitors' willingness to stay and behavioral compliance. Bright, warm waiting zones fitted with comfortable furniture and green plant decorations weaken public resistance against hospital environments. Visitors maintain longer patience and produce fewer irritability-triggered disputes. Decorative materials shape spatial temperament. Wood and fabric deliver warm texture and soften the cold-toned atmosphere of traditional hospitals. Stone and metal materials are durable and easy to sanitize, meeting hospital hygiene standards. Still, such rigid-texture materials shall only be used for partial decoration rather than large-area pavement, balancing practicality and humanistic warmth.

### **3.3. Cognition-rebuilding channel: Remove medical phobia and foster doctor-patient trust**

#### **3.3.1. De-medicalized environment and daily-style scene reconstruction**

Based on conditioned-reflex theory, hospital-related phobia originates from painful medical memories and fixed visual symbols inside medical buildings. Every time patients enter hospital zones, accumulated negative impressions trigger spontaneous nervousness. Artbased environmental design breaks such negative conditioned reflex chains and realizes de-medicalized space renovation. Ordinary waitingarea notice boards are replaced by bookshelves, green plants, and handpainted murals. Corridor walls display photographic art and illustrated paintings rather than stereotyped health-education posters. Householdstyle sofas, tea tables and ambient lamps are arranged in rest corners. Rigid medical venues turn into relaxing leisure spaces, ease visitors' wariness, and cultivate favorable impressions of hospital environments.

#### **3.3.2. Cultural resonance and spatialbelonging construction**

Cultural recognition forms the source of psychological security. Familiar local cultural symbols offer mental anchors for visitors in unfamiliar surroundings and ease environmental-strangeness-caused anxiety. Designers inject local cultural elements into hospital layouts. Water-town hospitals in southern China can extract white-wall-black-tile architectural features and traditional window patterns and convert them into modern decorative elements. Northwest-China medical institutions draw inspiration from local pottery colors and mural patterns for corridorwall decoration. Every hospital carries unique historical memories. History-exhibition corridors display institutional development courses and outstanding medical-staff deeds via diversified art exhibits, strengthening patients' trust and identification towards medical organizations<sup>[3]</sup>.

### **3.4. Doctor-patient relationship optimizing channel: Upgrade working conditions and encourage equal-status interactions**

#### **3.4.1. Relief of occupational burnout for medical workers**

Workplace environment quality is closely bound up with medical workers' sentiment and burnout risk. Long-term work within monotonous, aesthetically deficient spaces causes continuous emotional exhaustion. Optimized public-space art design serves patients as well as front-line employees. Green plants and delicate ornaments around nurse stations ease visual tiredness from highintensity clinical work. Warm-toned wall design and user-friendly furniture inside offices and staff-rest zones help practitioners release pressure and lower burnout incidence.

#### **3.4.2. Build inclusive atmosphere for doctor-patient interactions**

Environmental sentiment spreads among all on-site personnel. Warm-toned, art-optimized public spaces subtly affect patients, relatives, and medical workers. Different from stiff traditional consultation rooms, artistically decorated communication corners deliver a mild atmosphere for doctor-patient conversations. In relaxing scenarios, patients are more willing to describe physical discomfort and inner demands. Medical staff maintain patient-oriented service attitudes. Shared rest spaces eliminate identity gaps between service providers and receivers. Art exhibits become casual conversation topics, shorten psychological distances, and improve doctor-patient relations imperceptibly.

## **4. Optimization schemes for hospital-public-space art design targeting doctor-patient sentiment and medical-related behaviors**

The above-mentioned four-dimensional analysis interprets inner connections between artbased spatial layout and shifts in human sentiment and behavior. On this foundation, four categories of improvement plans are put forward to maximize the humanistic value of medical-space artistic construction.

### **4.1. Structurally planned visual-healing environment**

Visual-healing layout corresponds to the emotion-regulating mechanism. Color, lighting, and art installations work together and intervene in the mood of hospital visitors. Hierarchical color systems are formulated according to zone functions. Outpatient halls adopt low-saturation blue-green base colors for stable, spacious-feeling surroundings. Waiting zones are decorated with warm soft furnishings and paintings to offset cold-toned visual feelings. Muted beige and off-white are adopted in examination rooms for a gentle visiting atmosphere. Natural daylight enjoys priority during lighting design. Skylights and light wells deliver uniform daylight inside corridors. Adjustable LED lighting switches between daytime neutral light and night-time warm light in line with human physiological cycles. Themed art displays are deployed: landscape paintings decorate corridors and delicate installations are placed in waiting areas for multi-channel mood diversion.

### **4.2. Integrated upgrade of spatial navigation and signage framework**

Navigation-system renovation combines practical guiding functions and aesthetic experience, raising convenience for medical visits. A dual navigation framework consisting of color coding and graphic markers is constructed. Every functional department is assigned exclusive representative colors covering walls, floors, and signboards. Main passageways adopt slightly deepened pavement colors as invisible guiding belts. Pattern variations at turning points remind visitors of direction shifts. Children-oriented medical zones add interactive art-based decorations. Cartoon murals and ground game patterns relieve children's waiting-time anxiety. All interactive installations adopt easy-disinfection materials meeting hospital hygiene benchmarks<sup>[4]</sup>.

### **4.3. Local-featured cultural scene construction for cognition renewal**

Scenebuilding work eliminates visitors' stereotyped understanding of cold-toned hospital environments and cultivates spatial belonging. First, hospitals push forward de-medicalized renovation. Bookshelves, green plants, and art murals replace rigid publicity facilities. Sofa-equipped leisure corners create home-like relaxation spaces. Illustrated artwork replaces monotonous public-health posters on corridor walls. Second, local-culture elements are transformed into modern decorative language. Patients gain familiar cultural warmth within unfamiliar medical-building surroundings. Third, hospitals make full use of institutional historical resources. Exhibition zones display institutional development stories and excellent worker achievements, winning public trust and recognition.

### **4.4. Inclusive shared-space layout for doctor-patient communication**

Shared public spaces ease medical staff working pressure and build equal-status conversation environments. On the employee side, nurse-station surroundings are decorated with green plants and small-scale art ornaments to ease visual fatigue. Staff lounge furniture and color schemes are optimized for quick pressure relief. On the communication side, soft-style conversation corners replace stiff consultation chambers. Warm lighting and gentle art decorations support in-depth doctor-patient exchanges. Shared leisure zones break

the rigid service-recipient boundary, and artwork serves as casual conversation starters for a harmonious interpersonal atmosphere.

## 5. Conclusion

Art-related layout for hospital communal zones constitutes an essential segment for modern medical-environment construction. Through reasonable color matching, material screening, light-shadow shaping, and scene creation, artistic designs impose multi-layered systematic influences on the sentiment and behavior of doctors and patients. Its four core functions cover mood adjustment, behavioral guidance, public-cognition reconstruction, and doctor-patient rapport improvement. Rather than simple indoor decoration, hospital-space artwork becomes indispensable soft power supporting medicalservice quality and humanistic-care upgrading. Followup research can carry out large-scale field investigations and quantitative-based tests, explore action rules and threshold values of different decorative factors, and achieve personalized, refined medical-space human-oriented renovation, so as to fully realize the healing value of hospital public environments.

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