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Modeling the Design of Therapeutic Environments for Patients with Schizophrenia Based on Environmental Cognitive Patterns and Its Effect on Anxiety Reduction

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1. Round 1

1.1 Reviewer 1

Reviewer:

In the introduction, the statement “mental disorders contribute substantially to the overall burden of disease” would benefit from quantification (e.g., DALYs or prevalence rates) to strengthen its epidemiological grounding and align with contemporary reporting standards.

In the paragraph beginning “In recent decades, the understanding of mental health has evolved…,” the authors rely on a broad theoretical transition (biopsychosocial model) but do not sufficiently operationalize how this framework directly informs the study’s variables; a clearer conceptual linkage between environment and anxiety measurement is needed.

The comparison with “non-cognitive designed environments” lacks methodological rigor, as no formal control condition or randomization is described; the authors should clarify how these comparison environments were constructed and validated.

The paragraph describing "controlled natural light… colors with blue, green, and earthy undertones" reads descriptively but lacks statistical prioritization; although later figures address contributions, a formal regression table should be included.

In the section "Effective Components," the physiological explanation ("influencing melatonin and serotonin secretion") is asserted without direct measurement; this constitutes speculative inference and should be either supported with citations or removed.

Authors revised the manuscript and uploaded the updated document.

1.2 Reviewer 2

Reviewer:

The paragraph discussing Ulrich's work ("Early empirical findings by Ulrich revealed…") would benefit from a critical perspective, as it presents the findings unilaterally; the authors should discuss potential boundary conditions or criticisms of stress-reduction theory.

In the statement "patients with schizophrenia… often experience perceptual distortions," the authors generalize across a heterogeneous population; the manuscript would be strengthened by specifying illness stage (acute vs. chronic) or symptom profiles.

In the paragraph referencing Bandura's social cognitive theory, the integration appears superficial; the authors should more explicitly explain how reciprocal determinism is operationalized within environmental design variables.

The introduction claims that "fewer investigations have systematically examined how familiar cognitive patterns… can influence anxiety," yet no systematic review or gap analysis is provided; this claim should be substantiated with a structured literature synthesis.

In the methods description within the abstract, the qualitative phase mentions "20 architecture experts," but no criteria for expertise, years of experience, or disciplinary background are provided; this undermines the credibility of the qualitative component.

In the Findings section, the sentence "advanced and comparative statistical tests, including the paired-samples t-test, Pearson correlation analysis, and multiple regression analysis" lacks reporting of exact statistics (t-values, r coefficients, β weights); these should be explicitly reported for transparency.

The claim that anxiety reduction was "statistically significant at the 95% confidence level" is insufficiently precise; exact p-values and confidence intervals should be provided to meet reporting standards.

In the same paragraph, the description of design elements (e.g., "soft natural light," "cool and calming colors") is conceptually rich but operationally vague; the authors should define how these variables were standardized or manipulated across stimuli. Authors revised the manuscript and uploaded the updated document.

2. Revised

Editor's decision after revisions: Accepted.

Editor in Chief's decision: Accepted.

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