

# INPLASY

## Research contents, methods and prospects of Emotional Architecture based on systematic literature review

INPLASY202440004

doi: 10.37766/inplasy2024.4.0004

Received: 02 April 2024

Published: 02 April 2024

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### ADMINISTRATIVE INFORMATION

**Support** - This research received no external funding.

**Review Stage at time of this submission** - Completed but not published.

**Conflicts of interest** - None declared.

**INPLASY registration number:** INPLASY202440004

**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 02 April 2024 and was last updated on 02 April 2024.

### INTRODUCTION

**Review question / Objective** This study uses the PRISMA method to discuss the development status and research content of the intersection of Architecture and Emotional Engineering, and summarizes its theoretical basis. In order to study this research issue, we have developed the following sub-goals: Provide a global perspective on the background, trends, lines of research, and results of the development of Emotional Engineering techniques in the application of Architecture; Outline the ways in which Architecture and Emotional Engineering interact; To construct a theoretical framework for emotional-architectural interactions; Provide a solid theoretical basis for the interdisciplinary subject of Architecture and Emotional Engineering, and discusses its future research direction.

**Condition being studied** This study relies on the International Research Center for Emotional Architecture of Hebei University of Engineering, which has good equipment support and can also provide a basis for subsequent research. The retrieval and screening process of the paper has been completed, and the data is reliable ; The participants include doctoral tutors, post-doctors and postgraduates. The researchers have strong scientific research ability and rich research work accumulation. A related review has been submitted.

### METHODS

**Participant or population** Participants of any age will be included.

**Intervention** The intervention measures in the review process are the changes of the building

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environment, such as the internal environment of the building such as sound, light and heat, the external environment of the building such as green rate, and the facade of the building.

**Comparator** Because this study is a systematic literature review of qualitative research, there is no comparison and control, so the control is not applicable to this study.

**Study designs to be included** Since this study uses the PRISMA method to review the theoretical basis of the interdisciplinary subject of Architecture and Emotional Engineering, the empirical research design of building environment evaluation using Emotional Engineering technology will be included. The key words for the description of the built environment are : Architecture \* ; urban \* ; environment ; space, the key words for the description of Emotional Engineering are : Emoti \* ; brain \* ; eEG ; cG ; eDA ; psysico \* ; behavioral ; gesture ; cogni \* ; affect \* ; 'Eye tracking ' ; 'Facial expression '.

**Eligibility criteria** The inclusion criteria for the papers were: the papers were related to the architecture or planning industry, related to architectural design, environmental design, and urban design, were researched through empirical studies and were written in English.

**Information sources** Web of science, PubMed, IEEE Xplore, SpringerLink, Scopus, and ScienceDirect.

**Main outcome(s)** Through the analysis of the independent variables, dependent variables and interaction modes of the included empirical research, this paper discusses the research basis of the intersection of architecture and Emotional Engineering, and constructs the interactive mode and theoretical framework of Emotional Architecture.

**Quality assessment / Risk of bias analysis** Due to the large amount of data retrieved from the papers, which contained papers not related to this study, the authors performed two rounds of manual screening by reading the titles and abstracts of the articles and the full text. Because this article is a qualitative study, the risk of bias assessment is not applicable to this study.

**Strategy of data synthesis** In the process of data analysis, it is planned to use Excel to count and classify the independent variables, dependent variables and interaction modes of the article, and to make a quantitative and descriptive review.

**Subgroup analysis** This study is a qualitative literature review and is not suitable for specifying subgroups.

**Sensitivity analysis** Since this study is a qualitative study and does not involve mathematical functions, sensitivity analysis is not applicable to this study.

**Country(ies) involved** China.

**Keywords** Emotional Architecture; Built Environment Cognition; Emotional Engineering.

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