

Original Research Article

## The role of traditional medicine and human physiology in Iranian bath architecture: A case study of Kahyar Dehdasht bath, Ali Gholi Agha public bath in Isfahan, Vakil bath in Shiraz, and Bokan bath in Behbahan

AliReza RahmatNia<sup>1</sup>, Hamed Hayati<sup>2\*</sup>

- 1- M.A student of architectural engineering, Institute for Higher Education ACECR, Khouzestan, iran.
- 2- Assistant professor of architecture, University of Qom, Qom, Iran.

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### Abstract

The importance of architecture is increasing due to its wide range and its relationship with many other sciences. Therefore, medicine seems to have been one of the sciences that the architects of the past learned, and it is confirmed by the surviving buildings, written works related to medical advice, and its application in architecture. Bath is one of the most practical and specialized medical elements of architecture in cities and villages of Iran, which unfortunately the information available about it mostly contains cultural and social aspects with little attention paid to architecture in terms of space, therapeutic application, and the relationship between the building's physical body and the human. By refereeing to reliable sources of traditional medicine, this study seeks to deal with the relationship between the elements of Iranian baths with the issue of prevention and treatment and how the bath is formed according to traditional medicine. Given that the explanation of the hierarchical system of baths is based on health and treatment functions, this study aims to test the hypothesis that "the architecture of Iranian baths was formed from pre-Islamic times and then in the Islamic era in order to maintain human health or treatment." The approach of the research is based on the historical interpretation of documents about the medical issues related to bathroom architecture. The present study is based on a theoretical framework which examines the relationship between the elements and components of bathroom architecture and human health from the perspective of traditional medicine. Therefore, it is considered as interpretive or structural research (structuralism) from an epistemological viewpoint, theoretical in terms of orientation, comparative in terms of the method used, qualitative in terms of the data type, descriptive-analytical in terms of results, and historical-interpretive in terms of approach. The research has been carried out by typological analysis and through collecting library data and reading maps and documents as well as note-taking. By examining the pre-Islamic samples and then baths during the Islamic era, it can be concluded that Iranian baths were formed for the moderation of the two-dimensional structure of the human body and soul with therapeutic function. The common concepts and principles of nature, man, artificial environment, and hierarchy have been used in these baths according to the temperament, elements, and natural affairs that accompanied the gradual changes in baths. It can also be concluded that there is a two-way relationship between the form, system, hierarchy of movement and components of Iranian baths on one hand and human health in order to maintain health and do treatments.



## Extended Abstract

### 1. Introduction

Bath has been a practical and specialized medical element of architecture in the cities and villages of Iran, which is unfortunately mostly studied from cultural and social viewpoints and little attention has been paid to it in terms of space, therapy and the relationship between the physical body of the building and the human .By referring to reliable sources of traditional medicine, this study deals with the relationship between the elements of Iranian baths and the issues of prevention and treatment and how the bath is formed according to traditional medicine. Given that the hierarchical system of baths has been based on health and treatment functions, this study aims to examine the hypothesis that "the architecture of Iranian baths dates back to pre-Islamic times and then, in the Islamic era, served to maintain health or treatment." The research approach is based on the historical interpretation of documentary evidence that has dealt with the issues related to bathroom architecture. It is also based on a theoretical framework which examines the relationship between the elements and components of bathroom architecture and human health from the perspective of traditional medicine. By examining a pre-Islamic sample and then the baths of the Islamic era, it can be concluded that Iranian baths were formed according to the two-dimensional structure of the human body and soul with therapeutic functions. The common concepts and principles of nature, man, artificial environment, and the principle of hierarchy have been used in these baths according to the temperament, elements, and natural affairs that accompany the gradual change in the bath. However, it can be concluded that there is a two-way relationship between the form, system, hierarchy of movement and components of Iranian baths on one hand and human health on the other with the aim of maintaining health and treatment.

### 2. Research Methodology

This article adopts a scholarly approach to interpret historical evidence found in genuine medical texts related to the field of architecture with a specific focus on bathhouses. The theoretical framework of the research concerns the connection between the elements and components of bathhouse architecture and human well-being from the perspective of traditional medicine. Therefore, in terms of knowledge and understanding, the research is based on an interpretive or constructivist paradigm. The theoretical direction is comparative, employing a method of qualitative analysis, and the approach is historical-interpretive. The research is conducted through a typological analysis and with the data gathered from reliable sources such as maps, historical documents, and gathered information. Four traditional bathhouses in different cities of Iran, each having a different number of micro-spaces, have been chosen as a representative sample. The therapeutic strategies employed in these historical bathhouses are thoroughly analyzed by taking into account the diverse temperaments of individuals.

### 3. Results and discussion

Among The emergence of temperamental patterns resulted in the development of different types of bathhouses that aimed to establish a balance between the human body and its surroundings. This

was achieved through a hierarchy of spaces and gradual transitions through various areas, which allowed for a gradual adjustment to different temperatures and humidity levels. As a result, bathers were able to achieve temperamental equilibrium based on their bodily requirements and the duration of their stay. This pattern has had a considerable impact on treatment and health and is considered as one of the fundamental principles of traditional Iranian medicine. Another important aspect in the context of historical Iranian bathhouses is the shared principles between humans and their natural and artificial environments. These principles include balance, similarity, and hierarchical order, accompanied by gradual changes within the bathhouse environment. Throughout history, Iranian bathhouses have consistently demonstrated their close connection to traditional medicine and fulfilled their theoretical and practical objectives. From the pre-Islamic era to the Islamic periods, Architects have possessed substantial knowledge of medical practices and effectively incorporated them into their designs.

#### 4. Conclusion

The examination of the traditional medicine factors that have influenced the formation of bathhouses provides evidence for temperaments and architectural elements, psychological and physical dimensions as well as the incorporation of natural aspects in the design of Iranian bathhouses. These bathhouses contributed to the treatment and preservation of human health by integrating principles of psychological well-being and proper air circulation, which are fundamental to traditional medicine. Based on the points discussed, it can be concluded that architects, from the pre-Islamic era to the Islamic periods, have possessed substantial knowledge of medical practices and effectively incorporated them into their designs.

Several significant factors derived from traditional medicine can be observed in the architectural design of traditional bathhouses. These factors include:

- Prevention of sudden body temperature changes: This was achieved by incorporating a low-height entrance door, using successive spiral corridors with limited height, and facilitating a gradual transition from cooler to warmer spaces.
- Hierarchy: A bathhouse design included four distinct sections and a sequential movement path, comprising an entrance, vestibule, intermediate area, central pool and warm chamber.
- Steam generation for perspiration and body conditioning: Historical bathhouses employed steam chambers and heated the floors to promote perspiration and bodily adjustment.
- Adequate oxygen supply and ventilation for respiratory health: To maintain respiratory health, historical bathhouses featured elevated and spacious areas, such as warm chambers, along with interconnected corridors to segregate contaminated spaces. Furthermore, sunlight was utilized to ensure proper ventilation.
- Cupping therapy and other traditional medical practices: Specific areas within the bathhouses were designated for cupping therapy, and suitable spaces were provided for massage and rubbing. Various types of cupping instruments were used based on individuals' temperaments.

- Light therapy, color therapy, and image therapy: They adorned the walls with bright colors, employed tiles and bricks in different sections, utilized stained glass to illuminate the space, and incorporated vibrant patterns and colors.
- Hydrotherapy in historical bathhouses: Large pools and smaller basins were utilized to facilitate hydrotherapy treatments.

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