

Research Paper

## **The Effects of Nature's Presence Methods on Accommodating Residential Needs From The Islamic Lifestyle Perspective**

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### **Abstract**

*This research seeks to identify the indicators of nature's presence methods in housing design to explain a theoretical model concerning their effects on providing residential needs regarding monotheistic worldview and the Islamic lifestyle. The research method is descriptive-analytical. Indicators of the methods of nature's presence in the architecture of traditional Iranian houses have been extracted by investigating the theoretical foundations and case studies, through the qualitative content analysis method and the conceptual model of their effects on accommodating the residential needs has been explained by logical reasoning. To determine the importance of indicators and criteria for accommodating residential needs, the Expert questionnaire and the AHP method were used. The results of the correlation test that has been performed on the data obtained from determining the quality of indicators by a group of experts show the significant relationships between some of the different methods of nature's presence in architecture that were classified into four general factors. According to the results, the presence of the conceptual aspects of nature has had the greatest impact on providing the residential needs. In this context, the possibility of a relationship with the primary appearance of nature and applying indicators related to observing the hierarchical principle about determining spatial structure, access, and decoration application, have the greatest impact on providing a suitable context to apply other qualitative aspects of nature and accommodating residential needs.*

**Keywords:** *Nature's presence methods, Monotheistic worldview, Islamic lifestyle, Residential needs, Traditional Iranian houses.*

### **1. INTRODUCTION**

Respecting nature is of importance in many religions and cultures and nature is considered a sacred thing or creature of God, therefore the presence of its elements in the home plays a symbolic role in addition to physical functions. This demonstrates the importance of conducting this research to determine the methods of dealing with nature and natural elements in developing human settlements and investigate the relationship of these methods with culture and lifestyle. Nowadays, the two approaches of interacting with nature or overcoming it are more theoretically discussed in the development of human settlements. The basis of the first approach is taking

advantage of the potential of nature to provide the proper conditions for human comfort. In this regard, human activities in the past centuries have been in this direction, and the art of architects has emerged by identifying the potential in nature and finding ways to apply it to improve the quality of the residence. In this regard, Iranian architects have succeeded in creating an environment conducive to human habitation in harsh climates by making good use of the capabilities of the earth and elements such as water, wind, plants, knowledge of the principles of shading, and understanding the properties of natural elements and materials. Another approach whose intellectual roots date back to the late renaissance considers nature as a mechanism and as a machine whose order is mechanical that created by a wise creator (Nasr, 1996)

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According to this view, architecture operates using a human-centered approach to overcoming nature, regardless of the limitations and potentials of the context, and relying on technology capabilities.

The lifestyle as a model of collective behavior is institutionalized based on consumerism and the development of industry and technology has played an important role in improving it (Jensen, 2007). In recent decades, human activities, especially in the development of settlements, had a growing trend of destructive effects on nature. Respect for nature has a special place in Islamic culture, and constructive interaction with it is evident in Iranian traditional architecture. According to scholars, traditional Iranian architecture has always been contextual and conforms to the Islamic culture and lifestyle based on this interpretation (Bemanian & Zandi, 2018; Raeisi, 2019). Therefore, understanding the theoretical foundations of human-nature relations in traditional Iranian architecture, especially in the hot and arid climate, is very important to achieve compatible housing development strategies with the Islamic lifestyle.

Lifestyle is considered as one of the objective manifestations of culture that are effective on the variables that can deviate behavioral patterns and systems of activities from the right path and shape values and norms adapted from the authentic culture of society. As such, nowadays the diversity of Iranian society along with the processes related to globalization and the introduction of Western ideas into the various fields of social sciences, psychology, art, architecture, and so on, has led to change in the different levels of culture and prevent objectifying of many values and beliefs of Islamic culture in people's lifestyles which led to the emergence of the consumer society and its related lifestyle (Amanlou & Barzegar 2016; Bayangani et al., 2013; Shasti & Falamaki, 2014). The adverse effects of this are evident in the context of the current disruption in different fields, including architecture and urbanism, especially in most metropolises of Iran. Failure to provide peace of mind and in most cases even the lack of physical comfort in contemporary housing is considered the result of this disorder and the disproportion between Iranian living space and lifestyle appropriate to the Islamic culture. However, it is important to address these two issues about the residential needs.

Lifestyle determines the human activity system. The ways of interaction with nature are affected by lifestyle. Some of the most important criteria for matching traditional Iranian houses (TIH) with the basics of the Islamic lifestyle are the presence of manifestations of nature that emerged as objective forms, principles, or concepts which are existed in the houses and the traditional urban fabric of hot and arid

climate of Iran. These methods of nature's presence in architecture improve other aspects of the relational perspective (The relationship between man and God, self, others, and nature) (Fakouhi & Ghaznavian, 2012). Therefore, investigating the practical and theoretical aspects of the relationship with nature in the context of traditional houses in the hot and arid climate of Iran helps explain the strategies and actions of accommodating contemporary residential needs of the Islamic lifestyle.

In this paper, the main purpose is to determine the extent of the importance of Nature's presence methods in architecture in accommodating the residential needs of the Islamic lifestyle. The main question is:

What is the mechanism of applying nature's presence methods in traditional houses in the hot and arid climate of Iran in accommodating human residential needs?

## **2. RESEARCH METHODOLOGY**

The research method is descriptive-analytical. Criteria related to accommodating the residential needs of the Islamic lifestyle have been extracted based on theoretical foundations and literature review at two levels. The main method of extracting these criteria and their subsets was the qualitative content analysis of related texts, which included reference books and articles indexed in SID, NOORMAGS, and Magiran databases. According to the research assumption, equal importance is considered for the first level criteria, but in terms of determining the weight of sub-criteria, a survey was taken of a group of experts through pairwise comparisons in Analytical Hierarchy Process. This group of experts includes 26 Iranian architects with teaching backgrounds at the university who have also worked with government employers in the field of housing design. Also, the initial interview showed that the viewpoints of these architects are in line with the theoretical foundations of this research. At this stage, the normal weight of each sub-criterion was obtained by calculating the geometric mean and normalizing it by the column sum method (Delbari & Davoudi, 2012).

Similar to the method of the extraction of criteria, library resources were used to extract indicators related to nature's presence methods in traditional houses of Iran. These indicators were classified into eleven titles which contain principles, objective methods, and concepts, and the quality of accommodating the human residential needs is considered the dependent variable to them. Another part of the questionnaire which is based on the five-point Likert scale is related to determining the importance of indicators in accommodating human residential needs. The mean of the data from the answer of each expert was determined

and normalized to determine the weight of each indicator and the column sum method was used for this purpose (Ibid). Then, the importance of each indicator was determined based on the weight of each criterion and sub-criteria. Also, to investigate the interaction between indicators related to nature's presence methods, and to find the factors containing them, the correlation coefficient between the data obtained from the Likert questionnaire was evaluated in the form of a correlation matrix.

### **3. LITERATURE REVIEW**

JavadiNodeh et al. (2021) analyzed the architectural features taken from the physical environment (topography and climate) and structural environment (building form, spatial organization, material, landscape, and infrastructure) in traditional Iranian houses and showed that there was an optimal interaction between these components. Neghabi et al. (2020) have compared the role of technologies and solutions derived from nature in meeting human needs in both traditional and contemporary periods from the perspective of experts. The results showed that in the traditional era, nature has played a more effective role in meeting the various needs of human beings than in the contemporary era. Raeisi (2019) has categorized human needs in the framework of the Islamic lifestyle into two general categories, the needs arising from the material dimension, and the needs arising from the spiritual dimension of man, and has concluded that the presence of extroverted and introverted spaces in Iranian houses are effective, respectively, in providing these needs. Afshari Basir et al. (2017) have investigated the presence of water, plant, and light elements in traditional houses in Yazd and concluded that these buildings are designed concerning nature. Adeli (2013) outlines two fundamental principles of human and nature's intrinsic unity and human perfectionism about the human-nature relationship within the framework of Islamic ontology. Daneshjoo et al. (2015) have concluded that the use of natural-based materials, the use of water in the design, and the use of natural forms have had the greatest impact on how to tend to nature in contemporary Iranian architecture. Keramati (2007) believes that nowadays the component of nature in architecture is poor, so the triple relation of man, nature, and architecture is unrecognizable.

Daeipour (2014) believes that nature's presence plays a positive role in gaining a sense of place in TIH which is due to the ability to activate human sensory, activity, and semantic perceptions. Mehdi Nejad et al. (2012) believe that it is not planned for the beauty of nature and the reason for this beauty is the correct

response to the performance that converts natural beauty into an intrinsic and unconscious feature and propose to pay attention to the geometry in the natural elements to enjoy this kind of beauty. Khakzand and Ahmadi (2007) believe that the presence of nature's spirit in architecture leads to its promotion. Mamani et al. (2018) believe that the principles of Iranian architecture are derived from a rational logic and these principles are found in nature as a divine creation so any artifact that is compatible with these principles is committed to nature and God and respects human beings and human reason.

According to the results of previous studies, nature's presence in Iranian architecture and consequently the (TIH) can be investigated in two general aspects. First, the physical aspect of nature that the basis of its presence is limited in new patterns of contemporary housing. In this regard, we can mention the reduction of the area and quality of spaces such as the yard, porch, roof, etc. Also, it is not even possible to communicate effectively with this aspect of nature even visually in some cases, due to the lack of private open spaces and the need to respect the principle of privacy that is respected in Islamic culture. Taking advantage of the principles, concepts, and qualities of the natural elements is another aspect of nature's presence methods in architecture, which is also referred to as the spirit of nature. Such qualities in contemporary Iranian housing have not received much attention, the main reason is the imitation of western architectural styles and lack of attention to the principles and criteria that existed in Iran's traditional architecture that its application methods should be investigated according to the contemporary residential needs.

### **4. THEORETICAL FOUNDATIONS**

Nature is considered sacred in the Eastern schools of thought and what is divine is in close relationship and even unity with nature, despite its supernatural essence. According to this view, man considers himself a part of nature and is on the path to eractingint with it. As Grutter (1987) believes, this dual relationship becomes a triangular one in Western societies after the spread of the Christian worldview. According to this view, nature is recognized as one of the creatures of God and must be used by humans to achieve their material goals.

Man is known as the most honorable creature (Ashraf al-makhluqat) in Islamic thought and has the status of God's successor on the earth. Nature also manifests the presence of God, and in Islamic sources, man is invited to contemplate nature. All religions have taught that not only the content or spirit of divine teachings is sacred but also the forms that have

revealed God are also sacred (Nasr, 1996). So, nature is considered a sacred thing in Islamic culture, and man has a duty of playing role in interacting and aligning with nature's evolutionary path. The implication of this approach is to address concepts such as honesty, adaptability, balance, purity, the existence of semantic layers, and so on, in traditional Iranian houses (TIH) (Adeli, 2013). Hence, understanding the methods related to the presence of nature in the (TIH) along with re-referring to these concepts can be helpful to put housing development activities on the path of the Islamic lifestyle.

The concept of lifestyle was first introduced in the late 19th century by sociologists such as Simmel as the reflector of behavior and social class of individuals. Simmel believes that the whole lifestyle refers to the interconnected forms that people choose to live in terms of intrinsic motivation to balance the subjective personality and the objective and human environment (Karalus, 2018). Then, Adler's Personality Theory was introduced in the field of psychology, and after that, a new wave of addressing this concept began in the field of sociology in the sixties and seventies. According to Adler's view, a lifestyle was understood as a style of personality, in the sense that the framework of guiding values and principles which individuals develop in the first years of life end up defining a system of judgment that informs their actions throughout their lives (Adler et al., 2006). Also, according to Bourdieu, lifestyles, made up mainly of social practices and closely tied to individual tastes, represent the basic point of intersection between the structure of the field and processes connected with the habitus (Bourdieu, 1984). Rapaport believes that lifestyle is a subset (not a limited subset) of culture that shapes the system of human activities (Rapaport, 2005). As part of a system of human activities occurring in the person's place of residence, housing must provide the necessary context for the individual to pursue the desired lifestyle.

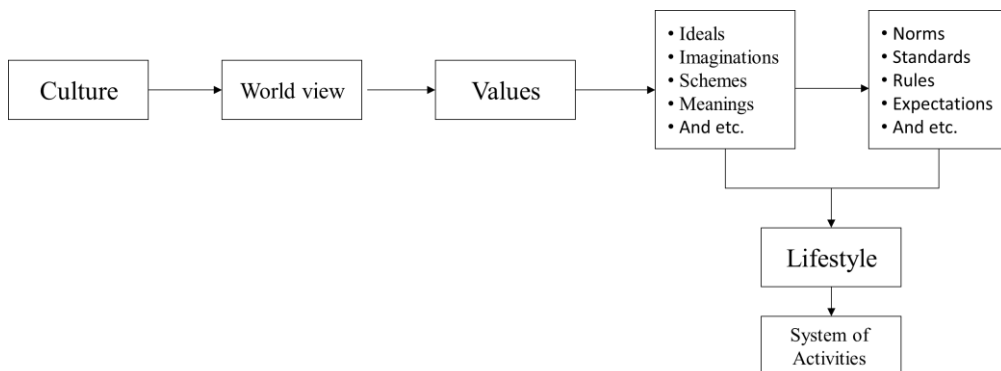
Nowadays, the lifestyle concept is investigated at four levels including global, national or structural, subcultural, and individual (Jensen, 2007). According to this classification, the Islamic lifestyle is defined at a structural level, which defines the differences and similarities in the norms, customs, and habits of individuals belonging to a country, community, or culture. Explaining lifestyle indicators at this level refers to the kind of nationalism that planning, promotion, and dissemination of it, is mostly done by governments. Concerning the proportion between housing and Islamic lifestyle Raeisi (2019) believes that introverted physical patterns are more in line with the Islamic lifestyle in comparison with extroverted models. According to the results of studies, Islamic

lifestyle indicators are generally divided into two individual and social groups (Azarshab & Mirmoradi, 2014; Bemanian & Zandi, 2018; HosseinPour et al., 2017; Khatibi & Sajedi, 2013). These indicators are divided into five categories in the field of architecture which are listed in Table 1.

## **5. RESIDENTIAL NEEDS FROM THE ISLAMIC LIFESTYLE PERSPECTIVE**

One topic that has always been discussed in the fields of psychology and sociology is addressing the basic needs of human beings and their grading. There are varied theories in this regard and in cases where these theories have been tested in different cultural contexts some contradictions have emerged. This fact indicates the need to examine human needs within the context of the culture, customs, and lifestyle adopted by them. Human needs have been subdivided into the lower-level needs and transcendent needs by the major Western scholars, and the need for belonging, esteem, self-transcendence, and self-actualization are raised between these two levels (Lang, 1987). Maslow believed that the lower level needs are more powerful, more inclusive, and more influential in behavior, and they show themselves earlier in the growth process as well. Much of the criticism of Maslow's theory and that of other psychologists is that human beings are made up of two physical and psychological dimensions, while the American psychologist Franklin describes the nature of man as physical psychological, and spiritual dimensions, and introduces the essential privilege of man in the spiritual and transcendent dimensions (Frankl, 2000).

The definition given by Maslow's theory of human existential dimensions differs substantially from that of Islam. Many of the spiritual needs introduced by Islam for man, such as the innate need to worship have been neglected in this theory (Raeisi, 2019). In Islamic thought, human existential dimensions have been divided into three groups, including physical, psychological, and spiritual, so human needs are also discussed in these three dimensions in Islamic architecture (Naghizdeh, 2002). Therefore, all human needs must be considered in the design and construction of housing based on the Islamic lifestyle. Since nature forms the context of human living space, accommodating human residential needs cannot be considered regardless of the way of interaction with nature. The human residential needs within the framework of the Islamic lifestyle can be presented in Table 2.



**Chart 1.** The Conceptual Model of Rapoport on the Relationship between Culture and Lifestyle. Source (Rapoport, 2005)

**Table 1.** The indicators of housing architecture regarding the Islamic lifestyle

Housing architecture indicators related to the Islamic lifestyle	Self-relationship	Individual privacy at home Promoting Family Relationships Communication with the residents of the house
	Relationship with family	Iranian house and collective life Diverse and flexible space Paying attention to the size of the house The respect for a guest
	Relationship with others	Maintaining Neighborhood Relationships Social interactions Privacy Avoiding physical diagnosis Adornment of house
	Relationship with nature	Preserving nature and not harming it Exploiting the potentials and laws in nature
	Relationship with God	Piety Modesty Humility

Source: Adopted by Author from (Bemanian & Zandi, 2018; Fakouhi & Ghaznavian, 2012; Hamzenejad & Eftekharian, 2015; Raeisi, 2019)

**Table 2.** Residential needs regarding the Islamic lifestyle

Residential needs regarding the Islamic lifestyle	
Physical dimension	Providing shelter Providing climatic comfort Supplying daylight and lighting Response to physical functions
Psychological dimension	Determining residential territories Maintaining personal and family privacy Inducing a sense of mental security Providing a sense of dignity to residents through the quality of housing Providing a suitable context for social interaction with neighbors Sensory Beauty Perception
Spiritual dimension	Providing a suitable context for Privacy, Thinking, and Worship Understanding the presence of God Spiritual Beauty <sup>1</sup> Perception

Source: Adopted by Author from (Altman, 1975; Azizibabani & Bemanian, 2019; Bemanian & Zandi, 2018; Raeisi, 2019)

<sup>1</sup> There are qualities such as modesty, contentment, gentleness, that are called Spiritual qualities. When people express these Godlike qualities, through their actions or artifacts and actively live them, they are expressing beauty which is called spiritual beauty.

## 6. THE MANIFESTATIONS OF NATURE IN THE TRADITIONAL IRANIAN HOUSES

Nature's presence has always been observed in traditional Iranian houses (TIH) in three appearances including primary, secondary, and abstract. Primary nature refers to the concept of nature that man has not transformed (Spirn, 2000). The application of primary nature in traditional houses of Iran has been aimed to provide environmental comfort and mental peace to residents mainly in spaces such as the central courtyard, sunken courtyard<sup>1</sup>, and porch. In this regard, the possibility of visual relation with the sky, benefiting from sunshine, wind, planting, and the presence of water in the central courtyard can be mentioned. The presence of water in the pond and courtyard in addition to its functional aspect is mostly used because of its aesthetic aspects (Sultanzadeh & Sadatzadeh, 2013). The plant plays an important role in regulating the environmental conditions of arid climates and gives shade and beauty to the yard in addition to its symbolic implications as well (Zare et al., 2012). The correct application of secondary nature is another way of maintaining physical comfort and mental peace in TIH. Materials used in construction have always been extracted from the surrounding environment, and this is considered one of the five principles of Iranian architecture (Pirnia, 1997). The brick used in construction due to the high heat capacity that gives to the walls has played an important role in providing comfortable conditions due to the hot and arid climate. Also, the color and texture of natural materials and their harmony with the context have given valuable qualities to architecture from the aesthetic point of view which is important in meeting some of the needs of the human spiritual dimension.

The third appearance of nature that exists in Iranian houses is the application of abstract nature (Makinejad, 2008). Islamic architecture is not form-oriented architecture, and its contents are mostly presented in the form of decorations. The decorations used in this type of architecture are largely an abstraction of the appearance of nature and this naturalism is rooted in ancient Persian beliefs and Islamic thought.

In addition to the three objective appearances of nature's presence methods in Iranian houses, some qualities and concepts can be found in the Iranian houses, which are rooted in nature. In this regard, honesty, purity, adaptability, balance, repetition and

rhythm, unity, different semantic layers, and hierarchy can be mentioned. Honesty is one of the greatest moral virtues and an attribute of the essence of God. Since nature is one of the manifestations of God in Islamic thought, therefore, it is free from all lies. Water and light, the main signs of nature's presence in the Iranian house, symbolize purity. There is no false component in the Iranian house and all components are functional. The manifestation of this is evident in the statics of the buildings as the forms and materials chosen for their construction are self-static.

The balance quality, as the manifestation of justice, is recommended by Islam for all Muslims. Balance, According to the principle of justice<sup>2</sup>, refers to this principle that every component should be placed properly also every building needs a balance for proper Statics from a geometric perspective. The principles of Islamic architecture are based on a balance that results in the comfort of the space user (Bemanian & Amini, 2011). The important factors in maintaining geometric balance in TIH are suitable proportions between the components of the building and observing the principle of symmetry. Repetition and rhythm are the other concepts found in natural structures and patterns. Repetition is not boring in Iranian architecture, mainly due to the variety of repetitive details, they gain the nature of rhythm and form a whole unit (Sadighakbari & Kazemi, 2014).

Leibniz believes that monads<sup>3</sup>, as inseparable components in nature, have unity. According to this view, the universe is an organized system in which Infinite types of monads have been combined to create a harmonious whole (Copleston, 1993). Space, light, color, surface, and material are the components that have been used in a meaningful way in TIH and all of them are used as tools to show the concept of unity. Unity can be exhibited by architects through the use of the three elements of geometry, light, and weight (Naghizadeh, 2012). Nature encompasses different semantic layers that human circumstances and environmental conditions are effective in their discovery and understanding. Most scholars believe that there are two types of meanings concerning the two concepts of meaning and place. The first type contains the meaning existing in the human mind and cultural and social values and factors have a significant impact on it, and the second consists of the intrinsic meaning existing in the place and there is a significant relationship between it and the environmental and physical characteristics of the place (Kalali & Modiri 2012). The Iranian architects

<sup>1</sup> A sunken courtyard is a courtyard below ground level.

<sup>2</sup> The principle of justice could be described as the moral obligation to act based on fair adjudication between competing

claims. As such, it is linked to fairness, entitlement, and equality.

<sup>3</sup> In the philosophy of Leibniz monad is an indivisible and hence ultimately simple entity, such as an atom or a person.

have created residential spaces by designing based on the principle of functionalism, designing based on community values, and applying symbols, that have different semantic layers. Observing the spatial hierarchy principle has also a significant effect on understanding different semantic layers in the Iranian house, in other words, one's mind gains readiness to perceive the meanings embedded in the space of the home through passing different spaces.

## 7. RESULTS

Residential needs and desires are related to three existential dimensions of man in the context of the Islamic lifestyle and based on the literature review most of them can be accommodated through the qualities arising from nature's presence methods in architecture. In this regard, it is necessary to redefine the values of TIH that are rooted in Islamic culture and to apply nature-based design qualities in the development of contemporary housing to provide housing according to the Islamic lifestyle.

Concerning the **research question**, the application of the secondary appearance of nature in terms of using natural-based materials in construction and plants in open and semi-open spaces had a significant effect on accommodating the material needs of man, and applying the nature-based concepts is effective in accommodating the higher-order needs and desires of humans. The symbolic role of some of the natural elements is also important in their multiple functions. The Iranian architects have provided the perfect context in the Iranian houses to accommodate the needs of various dimensions of human existence by using qualities derived from concepts such as honesty, purity, balance, unity, rhythm, and repetition of patterns in nature, in addition to applying the primary, secondary, and abstract appearance of nature. The architectural indicators of nature's presence in the TIH are listed in Table 3. To determine the extent of the impact of each indicator in achieving the ultimate goal, the hierarchical analysis process using expert opinions according to the conceptual model presented in chart 2 has been used.

Based on the assumption of the research, equal importance is given to the main criteria in the formulated hierarchical structure. The paired comparison method based on experts' opinions and the Saaty scale were used to determine the extent of the effects of sub-criteria in achieving the main objective. The weight of each sub-criteria was determined based on the obtained data. The results are presented in Chart 3.

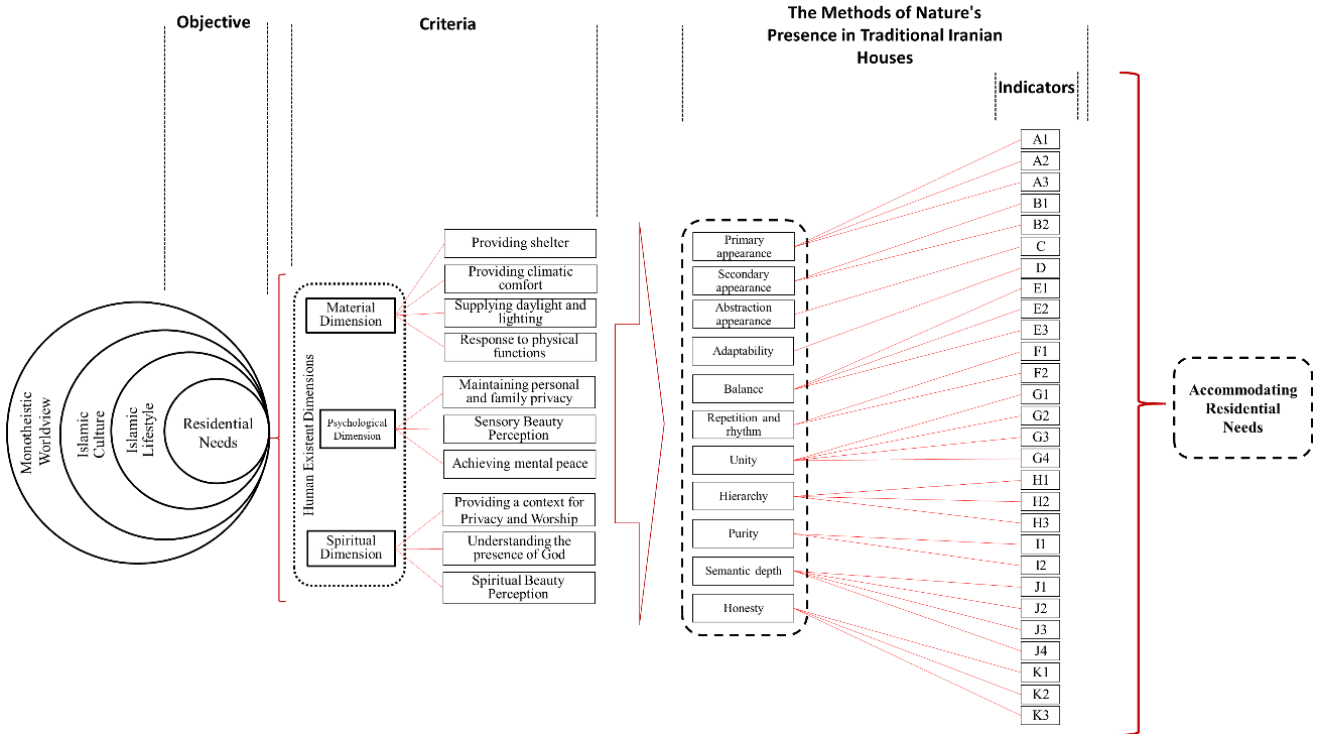
Another part of the questionnaire was devoted to determining the extent of the importance of indicators in accommodating residential needs of different human existential dimensions according to the 5-point Likert scale. The weight of obtained data was normalized as column sum and the role of methods of nature's presence in accommodating human residential needs were determined according to the weights of the criteria and sub-criteria based on chart 4. According to the results of the Likert questionnaire correlation test, there are significant relationships between factors listed in Table 4. Generally, the indicators of nature's presence methods in the TIH can be divided into four objective-conceptual, mechanism-functional, subjective-conceptual, and formal factors based on the performed factor analysis.

The sum of two subjective-conceptual and objective-conceptual factors that include concepts that are transmitted either directly or by the presence of the primary and abstract appearances of nature have the most impact on providing residential needs. The sub-set indicators of these two factors play a role mainly in providing the needs of the spiritual and psychological dimensions of humans. Besides, they have had the most impact on responding to the residential needs of humans compared to other methods of nature's presence. The sub-set indicators of the mechanism-functional factor had the most impact in form of the presence of the secondary nature appearance and observing the principle of adaptability with the environment on accommodating the residential needs of the human's material dimension. The formal factor indicators, which consist mainly of formative perceptions of natural elements, have had the lowest impact on providing residential needs compared to other factors.

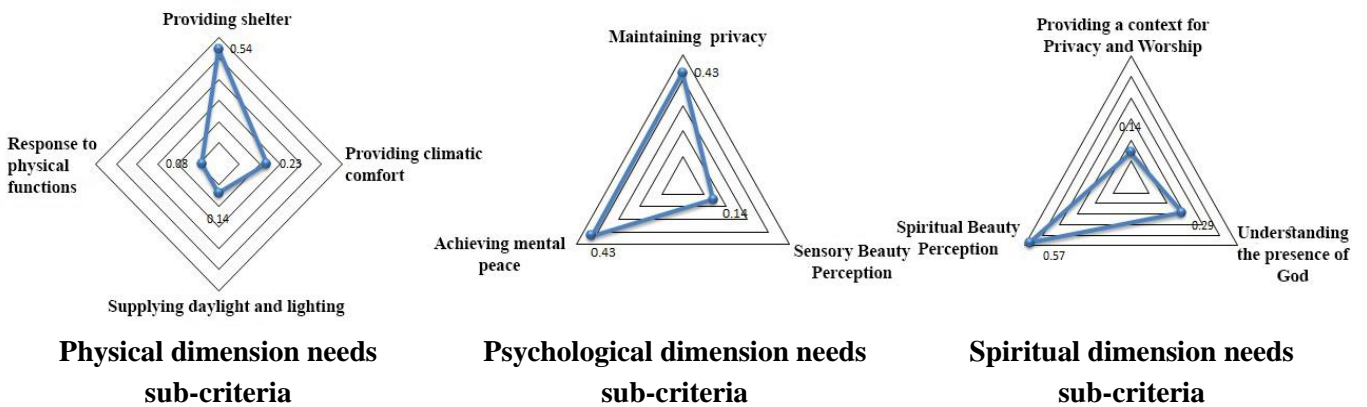
**Table 3.** The Architectural indicators of nature’s presence in the TIH

methods of Nature’s Presence	Indicators	Sources
Primary Appearance	A1	Making it possible to communicate visually with the sky, surrounding landscapes, and natural elements
	A2	Placing pool, waterfront, trees, and plants in the open spaces
	A3	Providing airflow and sunlight in the living space
Secondary appearance	B1	Using natural-based and vernacular materials
	B2	Using shrubs and plants in open and semi-open areas
Abstraction appearance	C	Using abstract forms of natural elements in motifs, decorations, and forms of some components of the building
Adaptability to the environment	D	Achieving optimum form and materials using trial and error process (gradual evolution over time)
Balance	E1	Keeping the correct proportions between the components of the building
	E2	Adherence to the principle of local symmetry and balance
	E3	Maintaining geometric balance in components
Repetition and rhythm	F1	Duplication in detail and decoration
	F2	Application of similar volumes and shapes and creating rhythm in their repetition
Unity	G1	Using module
	G2	Holistic approach (Harmony with urban fabric)
	G3	Using logical, numerical, and geometric proportions
	G4	Similar proportions in decorations and geometric structure
Hierarchy	H1	Functional and visual separation of different areas outside and inside the house
	H2	Observing the principle of introversion
	H3	Avoiding indoor visibility from outside
Purity	I1	Using water element as a symbol of purity
	I2	Directing daylight to different parts and controlling it to meet the qualitative needs of spaces
Semantic depth	J1	Using symbols that conform to the native culture
	J2	Using symbol-based aspects of the natural elements
	J3	Using varied geometry in plan and meanings associated with shapes
	J4	Using color and texture and their associated meanings
Honesty	K1	Compatibility of the facade and its backspaces
	K2	Using functional components in the building
	K3	Demonstrating the transfer of forces in the structure of the building properly and the use of self-static forms and materials

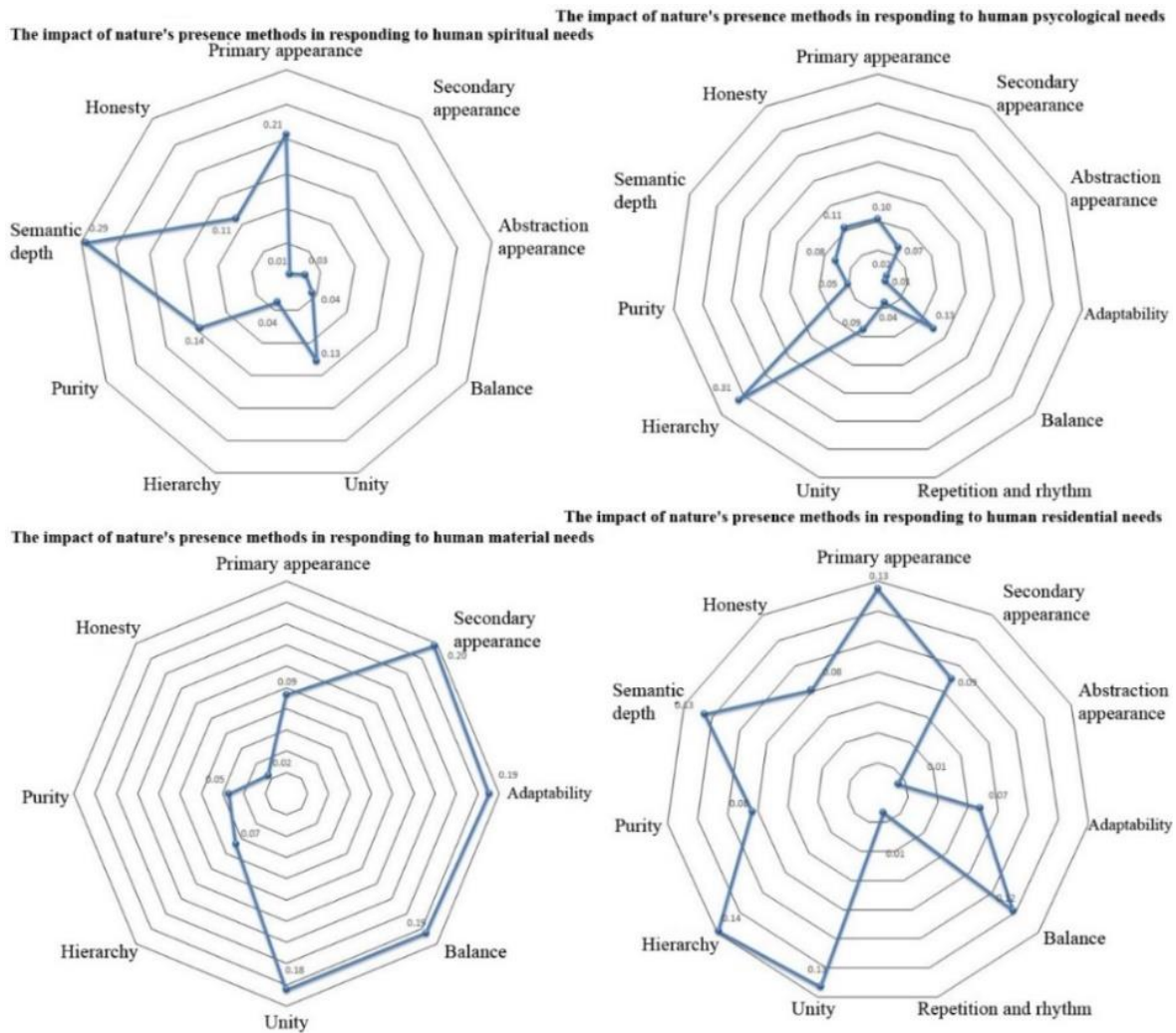




**Chart 2.** The conceptual model of the effects of nature's presence indicators in accommodating residential needs. Source: Authors



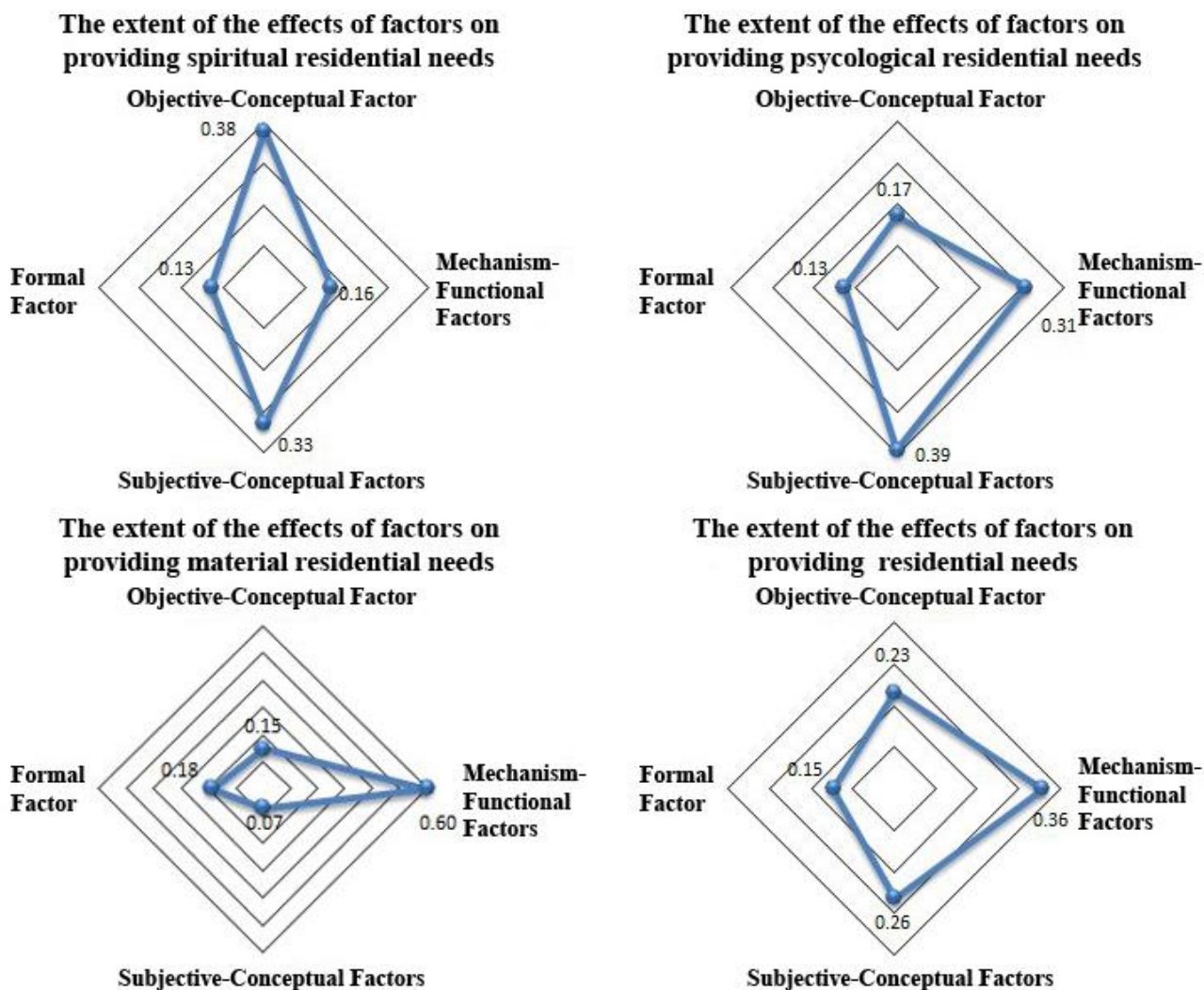
**Chart 3.** The weight of the sub-criteria for accommodating the residential needs and desires from the Islamic lifestyle point of view



**Chart 4.** The extent of the effects of different nature’s presence methods on accommodating residential needs

**Table 4.** Correlation Test of the impact of the application of nature’s presence indicators on the accommodation of the residential needs

			Objective-Conceptual Factor			
			Primary Appearance	Abstraction appearance	Purity	
Objective-Conceptual Factor	Primary Appearance	Pearson Correlation	1	.540**	.626**	
	Abstraction appearance	Pearson Correlation	.540**	1	.502**	
	Purity	Pearson Correlation	.626**	.502**	1	
			Mechanism-Functional Factors			
			Secondary appearance	Adaptability	Balance Honesty	
Mechanism-Functional Factors	Secondary appearance	Pearson Correlation	1	.617**	.515** .569**	
	Adaptability	Pearson Correlation	.617**	1	.715** .501**	
	Balance	Pearson Correlation	.515**	.715**	1	.594**
	Honesty	Pearson Correlation	.569**	.501**	.594**	1
			Subjective-Conceptual Factors			
			Hierarchy	Semantic depth		
Subjective-Conceptual Factors	Hierarchy	Pearson Correlation	1	.763**		
	Semantic depth	Pearson Correlation	.763**	1		
			Formal Factor			
			Repetition and rhythm	Unity		
Formal Factor	Repetition and rhythm	Pearson Correlation	1	.607**		
	Unity	Pearson Correlation	.607**	1		



**Chart 5.** The extent of the effects of four obtained factors on accommodating residential needs of different human existential dimensions

## 8. DISCUSSION

The most important criterion in accommodating the material dimension of human residential needs is the provision of shelter. In this regard, applying the secondary appearance of nature by providing the necessary tools and materials for this purpose, along with observing geometrical laws to maintain balance for building a roof, is very important. Providing human climatic comfort in the living space is effective in accommodating another part of the material needs. Accommodating this need is impossible without interfering with nature and considering living conditions for humans. In this regard, it can be pointed out that the suitable application of the secondary appearance of nature through the use of natural-based, eco-friendly, and climate-friendly materials is important. Adaptability to the surrounding environment in the process of evolution is the quality found in natural organisms. Iranian architects have

achieved optimal forms, materials, and dimensions by observing this principle over time and by performing trial and error processes, also applying this principle is necessary for providing climatic comfort for man. Observing the principle of the spatial hierarchy that leads to separating different spaces in arid climate houses has a positive impact on providing proper climatic conditions for various spaces according to their hours of use. Supplying suitable lighting based on the function of spaces in the house and responding to functional necessities that can be varied based on the users' lifestyle, are other criteria in providing residential needs of the material dimension of man. Providing the basis for routine activities in the house is the purpose of the material residential needs accommodation, but concerning the other aspects of human existence, controlling the sunlight has a significant impact that has not gone unnoticed in TIH.

Observing the spatial hierarchy and the Introversion principle in Iranian architecture confirms

the importance of family privacy in Islamic culture. The vital factors in preventing visual communication of strangers with interior spaces are the geometrical proportions of open spaces such as the courtyard, Eyvan<sup>1</sup>, and sunken courtyard beside using plants and trees, as well as the proper design of the facades and dimensions and the place of the openings. Therefore, observing the principle of the spatial hierarchy has had the most impact on accommodating the needs of the psychological dimension of humans. Applying the concepts such as balance and honesty, along with using the primary and secondary appearance of nature have a significant effect on providing mental peace and the perception of sensory beauty.

Providing the necessary context for understanding spiritual beauty regarding the needs of the human's spiritual dimension is very important. Thus, it is necessary to address the meanings behind the objective forms of nature's presence in architecture. In this regard, making it possible to communicate with the primary appearance of nature and the existence of different semantic layers in the spaces and components of the Iranian houses, along with references to the concept of purity through the use of elements such as water and light, has had the most impact on understanding spiritual beauty. Also, it is possible to build spaces for personal privacy by observing the principle of spatial hierarchy, which has also provided the basis for thinking and worship.

Generally, observing the hierarchy principle has had the most impact on accommodating the residential needs of the Islamic lifestyle. In the architecture of the hot and arid climate of Iran application of this principle has protected the interior spaces of the house from unpleasant external factors and has provided comfort for residents and the necessary context for privacy to address spiritual affairs. This result is consistent with the results reported by researchers like (Amini & Nouroozianpour, 2014; Azarshab & Mirmoradi, 2014; Bemanian & Zandi, 2018; Hamzenejad & Eftekharian, 2015; Raeisi, 2019) which indicate the importance of the privacy principle as one of the main indicators to provide human tranquility in the context of the Iranian-Islamic lifestyle. Some of the most important qualities of housing include providing the possibility of individual and collective privacy in many cultures, including Islamic culture have been pointed out in several studies (Altman, 1975; Arjmand & Khani, 2012; Khamenehzadeh, 2017; Nasiri, 2009). Providing the possibility of relation with the primary appearance of nature is placed in the second level of importance in

accommodating residential needs because of the function of natural elements in providing climatic comfort and considering nature as a sacred thing in the Islamic culture. Unity is another quality inspired by nature that has emerged in the form of the use of Module, the harmony between the house and the surrounding urban fabric, the harmony in the decorations and the geometric structure as well as the use of reasonable proportions in the TIH. It is of great importance to coordinate with the surrounding buildings to provide climatic comfort in hot and arid climate urban fabric. Besides observing this principle guarantees the visual relation of houses with the primary appearance of nature and refers to the spiritual world in terms of aspects of the unity of God. Therefore, the application of this quality in the TIH has been important in meeting the needs and desires of human beings. According to the results reported by researchers and performed analysis, the following model can be presented concerning the effect of the methods of nature's presence in architecture in accommodating the residential needs of the Islamic lifestyle.

## 9. CONCLUSION

The basis of the Islamic lifestyle is the monotheistic worldview and Islamic ideology and culture. In this context, residential needs are of importance in the spiritual dimension in addition to the physical and psychological dimensions. Nature has provided the necessary basis for accommodating human residential needs and has played an important role as the main resource of innate and desirable qualities from the perspective of the Islamic lifestyle. Nature's presence methods in the TIH include three objective forms and eight rules and concepts. According to the results, indicators related to the methods of nature's presence in the TIH can be divided into four factors, objective-conceptual, mechanism-functional, subjective-conceptual, and formal. the application of conceptual aspects of nature in the form of sub-set indicators of objective-conceptual and subjective-conceptual factors has the most impact on accommodating the residential needs of the Islamic lifestyle. The greatest contribution in responding residential needs of humans within the mentioned framework belongs to applying indicators related to the hierarchy principle that is a prominent feature of natural organisms. The hierarchy principle has been objectified in the form of the spatial structure of the house to control access, natural light, visual

various forms and dimensions with several functions like Terrace (without ceiling) and is called Mahtabi in different Iranian cities.

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<sup>1</sup> Eyvan is one of the most important elements of Iranian architecture spaces that are common in traditional houses. It has

relation between spaces, and application of decorations in various spaces. Observing this principle has been effective in facilitating the achievement of climatic comfort on the scale of urban environment and house, besides providing the necessary visual privacy for private spaces which is from the needs of the human psychological dimension. Also observing the hierarchy principle provides the necessary context to create suitable spaces for the individual and collective privacy of man. Some of the most important items that should be prioritized as conceptual factors

to provide human needs include the possibility of relation with the primary appearance of nature and the existence of semantic layers in the spaces and components of the TIH. It should be noted that the architectural indicators that lead to providing the qualities derived from the above concepts can have simultaneous effects in accommodating the needs of different dimensions of human existence, so their presence has become a top priority in providing residential needs.

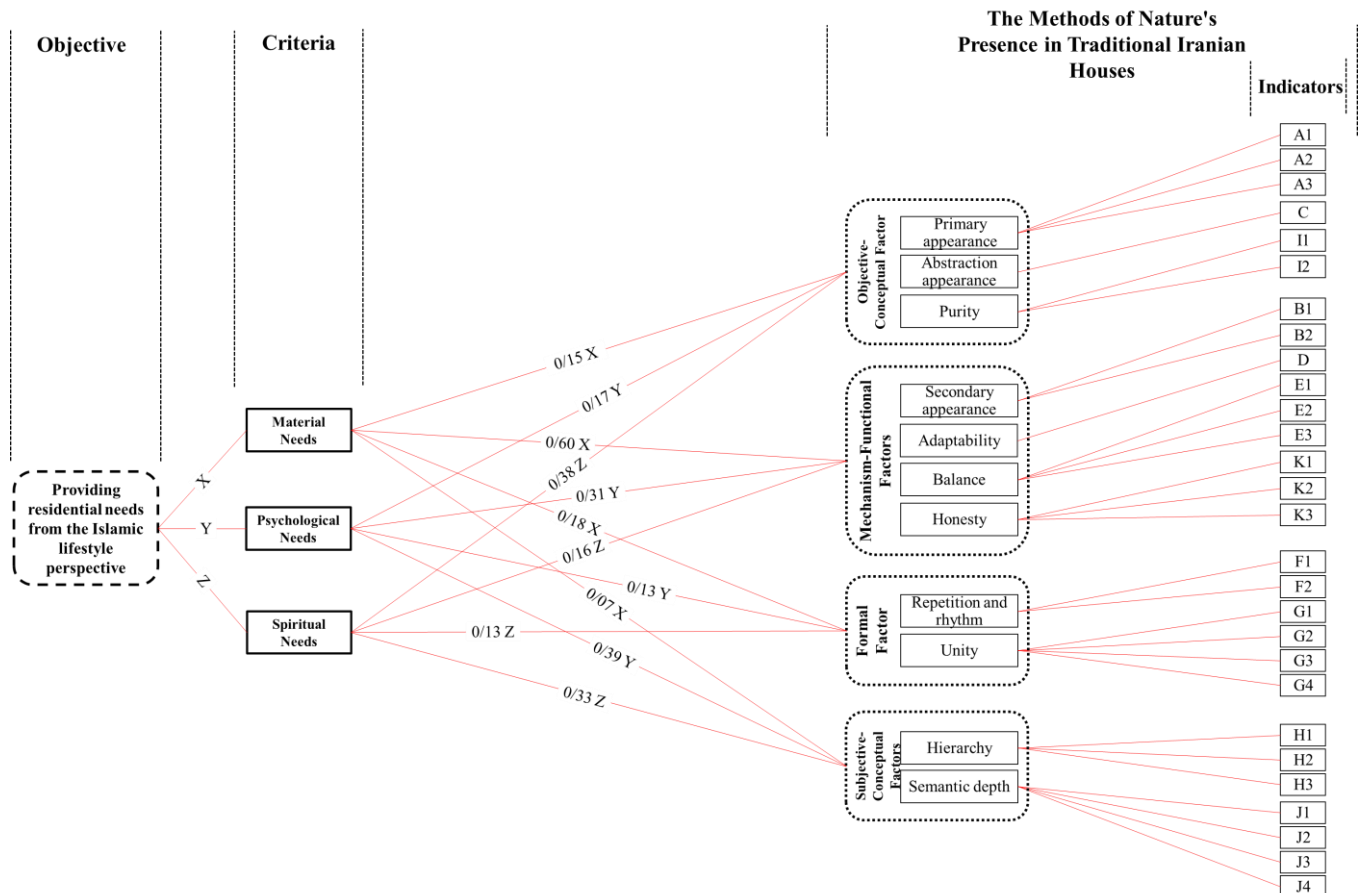


Chart 6. The developed model of the research. Source: Authors

REFERENCES

Adeli, S. (2013). Nature and Architecture in Islamic Ontology A survey on traditional houses of central plateau of Iran with emphasis on four houses in Yazd, Naen and Kashan. *Scientific Journal of Motaleate-e Tatbighi-e Honar*, 3(5), 103-117.

Adler, A., Ansbacher, H. L., & Ansbacher, R. R. (2006). *The individual psychology of Alfred Adler : a systematic presentation in selections from his writings*. HarperPerennial.

Afshari Basir, N., Nasiri, B., & Mofidi Shemirani, S. M. (2017). The role of natural elements in Yazd vernacular houses. *Journal of Urban Management*, 16(46), 297-306.

Altman, I. (1975). *The environment and social behavior: Privacy, personal space, territory, crowding*. Brooks/Cole.

Amanlou, H., & Barzegar, E. (2016). The Evaluation of the Lifestyle of the Appointed Agents in the Islamic Republic of Iran by using Importance - Performance Analysis (IPA). *Islamic Iranian Progress Model Studies*, 4(7), 9-34.

Amini, N., & Nouroozianpour, H. (2014). Privacy and Secrecy: Understanding the Differences and Similarities of these Two Concepts in Architecture and Urban Development. *Journal of Studies on Iranian-Islamic City*, 15, 99-107.

Ansari, M., & Ebrahimi, A. (2010). The geometry of proportions in the architecture of Turkmens of the

- Qiyunlu period, Kaboud Mosque (Turquoise Islamic World). *Science and Technology Ketabmah*, 35-45.
- Arjmand, M., & Khani, S. (2012). The Role of Privacy in the Architecture of Iranian House (With a View towards This Role in Islamic Architecture and Culture). *Journal of Studies on Iranian-Islamic City*, 2(7), 27-38.
- Azarshab, M., & Mirmoradi, E. (2014). Indicators of Islamic-Iranian Lifestyle. First National Conference on Research and Development in the Third Millennium, Aliabad Katoul Branch.
- Azizbabani, M., & Bemanian, M. (2019). The Effects of Incremental Housing Approach on The Level of Residential Satisfaction. *International Journal of Architecture & Planning*, 7(1), 205-225.
- Azizbabani, M., & Bemanian, M. (2022). Role of the Architectural Application of Nature in Improving the Quality of Semantic Depth in Iranian Urban Housing. *Journal of Sustainable Architecture and Civil Engineering*, 30(1), 50-64.
- Bayangani, B., Irandust, S. F., & Ahmadi, S. (2013). Lifestyle from sociology attitude: Introduction to cognition and analyses of lifestyle concept. *CULTURAL ENGINEERING*, 87(77), 56-74.
- Bemanian, M., & Amini, M. (2011). A Study of Effective Indicators in the Formation of Balance in Muslims' Architecture (A Case Study: The Jāme'h Mosque of Isfahān). *Journal of Studies on Iranian-Islamic City*, 5, 17-27.
- Bemanian, M., & Zandi, M. (2018). *Iranian housing and lifestyle*. Aval va Akhar.
- Bourdieu, P. (1984). *Distinction: A social critique of social judgment of taste* (R. Nice, Trans.). Harvard University Press.
- Copleston, F. (1993). *A History of Philosophy, Vol. 1: Greece and Rome From the Pre-Socratics to Plotinus*. Image.
- Daeipour, Z. (2014). The relationship between the presence of nature and the increase in the sense of belonging in the Iranian traditional houses. *Bagh-e Nazar*, 11(30), 49-58.
- Daneshjoo, K., Mirhosseini, S. M., & Mahdavejad, M. (2015). An Introduction to the Naturalism in Examples of Contemporary Iranian Architecture. *Hoviat Shahr*, 9(23), 83-90.
- Delbari, S. A., & Davoudi, S. A. (2012). Application of Analytical Hierarchy Process (AHP) technique in ranking tourist attraction evaluation indices. *Journal of Operational Research in Its Applications*, 9(2), 57-79.
- Fakouhi, N., & Ghaznavian, Z. (2012). Anthropological study of desirable spatial diversity from the perspective of residents of urban houses in Tehran, Alborz and Qazvin. *Iranian Journal of Anthropological Research*, 2(2), 29-52.
- Frankl, V. E. (2000). *Man's Search For Ultimate Meaning*. Basic Books.
- Grutter, J. K. (1987). *Aesthetics in Architecture*. W. Kohlhammer.
- Hamzenejad, M., & Eftekharian, S. M. (2015). Islamic lifestyle indicators in housing design. National Conference on Iranian Native Architecture and Urban Development, Yazd.
- Hejazi, M. (2009). Sacred Geometry in Nature and Persian Architecture. *History of Science*, 6(2), 17-44.
- HosseinPour, R., Balali oskoei, A., & Keinejad, M. (2017). Explanation of Islamic (Razavi) Lifestyle Solutions in Iranian Society. *Razavi culture*, 5(19), 7-39.
- JavadiNodeh, M., Shahcheraghi, A., & ANDALIB, A. (2021). An Evaluation of the Ecological Architecture Influenced by the Interaction Between Structural Environment and Nature in Cold Areas (Case Study: Two Traditional Houses in Ardabil). *NAQSHEJAHAN*, 11(1), 15-36.
- Jensen, M. (2007). Defining lifestyle. *Environmental Sciences*, 4(2), 63-73.
- Kalali, P., & Modiri, A. (2012). Explanation of the role of meaning component in the process of creating the sense of place. *Honar-Ha-Ye-Ziba (Memari-Va-Shahrsazi)*, 17(2), 43-51.
- Karalus, A. (2018). Georg Simmel's The Philosophy of Money and the Modernization Paradigm. *Polish Sociological Review*, 204(4), 429-444.
- Keramati, G. (2007). *Soft Space and Hard Space Companion in Iranian Architecture*. Faculty of Art and Architecture, Islamic Azad University, Science and Research Branch, Tehran.
- Khakzand, M., & Ahmadi, A. (2007). Interaction of nature & architecture: A glimpse. *Bagh-e Nazar*, 4(8), 35-47.
- Khamenehzadeh, H. (2017). An Introduction to the Concept of Privacy and How it is Realized in the House Life-World1 Comparative Study in Pre-modern and Modern Iranian Houses. *Bagh-e Nazar*, 14(49), 33-44.
- Khatibi, H., & Sajedi, A. (2013). A Review of Islamic Life Style Indicators. *Ma'rifat*, 22(185), 13-25.
- Lang, J. (1987). *Creating Architectural Theory: The Role of the Behavioral Sciences in Environmental Design*. Van Nostrand Reinhold.
- Makinejad, M. (2008). *Iranian Art History in the Islamic Era: Architectural Decorations*. SMT Publication.
- Mamani, H., Yari, Y., & Haghiri, S. (2018). Components of Iranian-Islamic Architecture and the Identity-Constructing Role of Embellishments. *Journal of Art and Civilization of the Orient*, 6(21), 37-46.
- Mehdinejad, J., Sabri, R., Damavandi, M., & Abaspour, J. (2012). Architectural Design on the Basis of Beauty and Function in Nature. *Hoviatshahr*, 6(10), 59-66.
- Naghizadeh, M. (2012). Reflection on Understanding the Basics of Iranian Islamic Housing. *Art Ketabmah*, 170, 38-54.
- Naghizadeh, M. (2002). The impact of architecture and the city on cultural values. *Honar-ha-ye-ziba Memari-Va-Shahrsazi*, 62-76.

- Nasiri, N. (2009). A comparative study on the conception of privacy. *Honarhaye Ziba, Memari va Shahrsazi*, 1(39), 37-46.
- Nasr, S. H. (1996). *Religion & the Order of Nature: The 1994 Cadbury Lectures at the University of Birmingham*. Oxford University Press.
- Neghabi, M., HASHEMPOUR, P., & ASEFI, M. (2020). Explaining the Function of Nature-Derived Patterns in Architecture in Responding to Human Needs in the Traditional and Contemporary Period. *JOURNAL OF RESEARCHES IN ISLAMIC ARCHITECTURE*, 8(2), 113-129.
- Noghrekar, A. h. (2008). *An Introduction to the Identity of Islamic Architecture in Architecture and Urban Development*. Ministry of Roads & Urban Development.
- Pirmia, M. (1992). *Introduction to Islamic Architecture*. IUST.
- Pirmia, M. (1997). *Stylistics of Iranian Architecture*. Soroush Danesh.
- Raeisi, M. (2019). *Architecture and urbanism in accordance with Islamic lifestyle*. Qom university.
- Rapoport, A. (2005). *Culture, Architecture, and Design*. Locke Science Publishing Co.
- Sadighakbari, S., & Kazemi, M. (2014). Comparison of Musical Concepts of Traditional Context in Yazd and Tabriz. *Hoviatshahr*, 8(19), 101-110.
- Shasti, S., & Falamaki, M. M. (2014). Relation between Iranian Life Style & Housing Form (Based on «The Short-Term Society» & «Geostrategic and Geopolitical Theory of Iranian Society» Theories). *Interdisciplinary Studies in the Humanities*, 6(3), 117-137.
- Shia, E. (2007). *With the city and region in Iran*. IUST.
- Spirn, A. W. (2000). *Language of Landscape*. Yale University Press.
- Stewart, I. (2001). *What Shape Is a Snowflake?* Weidenfeld & Nicolson.
- Sultanzadeh, H., & Sadatzadeh, G. (2013). Investigating the Role of Water and Environment Usage in Sustainability of Iranian Traditional Architecture. Architecture and Sustainable Development Conference, Bokan.
- Vincent, J. (2014). Biomimetics in Architectural Design. *Intelligent Buildings International*(12), 1-12.
- Zare, L., Naghizadeh, M., & Hariri, S. (2012). The Nature in the Courtyard, a Comparison Approach in Kashan Residences. *Hoviatshahr*, 6(12), 49-60.

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