

Designing a Desirable House with consideration of Strengthening the Sense of Peace of the Residents: A Case of District 6 of Tehran

Maryam Sabaroo, Abazar Mehrali*

Abstract: Humans in modern society are faced with different environmental changes; creation of residential spaces is one of these changes in environmental structure of people in society. The sense of place means people's mental perception of the environment and their more or less conscious feelings about their environment, which places one in an internal relationship with the environment so that one's understanding and feeling are linked and integrated with the semantic context of the environment. This feeling is a factor that transforms a space into a place with special sensory and behavioral characteristics for certain people. This study investigates the sense of peace in residential buildings and its constituent factors. Now the question is, how to increase the sense of peace in people with proper design in residential environments? For this purpose, this study tends to examine the effect of a desirable house on strengthening the sense of peace of the residents by using a quantitative-qualitative method and using documents, observation, and questionnaires to find out how a suitable design induces a sense of peace in people. Based on findings obtained from field studies and data extracted from the questionnaire, it was found that residential complex indicators and residents' sense of peace have a significant effect on the satisfaction of the residents of the residential complex ($p < 0.05$). Therefore, it can be claimed with 95% confidence that residential complex indicators and residents' sense of peace had a significant effect on the satisfaction of the residents of the studied residential complex in Tehran. The results also show that using more simple lines and fewer broken lines in the design of building form and considering areas and separating them from each other, as well as color, light, perception, and psychology of the environment are factors that cause a sense of satisfaction and a sense of peace in residents.

Keywords: environmental psychology; residential spaces; sense of belonging; sense of peace

1 INTRODUCTION

The importance that is now given to the relationship between architecture and human activities is one of the most important reasons for this study. This study discusses the recognition of human collective activities concerning the architecture of the Iranian courtyard from the perspective of cinema [1]. In the contemporary era, with the increase of individualism, the physical environment as a carrier of neighboring people has been highlighted to bring them closer to each other and to compensate for a part of the lost social interactions in the buildings and architectural and urban arrangements of the past [2]. Contemporary man faces many dangers; due to the increase in the population of the world, the shrinking of residences, and the increase in working hours outside residences, the human spirit and psyche have been irritated. This has manifested itself in industrialized societies, and depression has increased among youth and caused a loss of motivation to continue living more. Natural elements in indoor spaces increase the presence of people in the indoor environment and people feel a sense of belonging to the environment. This improvement in the quality of interior spaces stimulates the motivation and desire for life in the subconscious of people [3]. House, as a space for living, has always been one of the first spaces that humans have dealt with since the beginning of history; characteristics of this building, especially its interior, have been of great importance due to its direct connection with humans during the long hours of the day. Peace is one of the mental needs of every person. Nowadays, we humans usually spend most of our time at home and hence we seek to find peace at home and rest our body and soul in this place [4]. For a long time, housing satisfaction has been one of the favorite subjects of environmental psychologists; this is an attitude that reflects the satisfaction of residents living in a particular place that can meet their needs, expectations, and goals [5]. One's goal

in building a house is to have a peaceful residence. Peace in the Moin dictionary means leisure, comfort, stillness, security, peace, and reconciliation [6]. Among the spaces around the house, it is the immediate space related to a person. It is the first space in which one experiences a sense of spatial belonging [7]. Under these conditions, the design of the home environment should have a favorable effect on the human psyche. Due to the direct connection of the living space with the human psyche, proper and desirable design can have positive effects and inappropriate design can have destructive effects, and even indifference and lack of standards in design can cause people to become discouraged [8]. One of the related items in design is color, which is one of the most important effective factors in people's lives and plays an essential role in establishing a relationship between humans and the surrounding environment. Humans and colors are a subset of the whole world system that are constantly interacting and balancing each other, and ultimately humans are affected by colors [9]. Color is one of the most important and prominent features in the peacefulness of residential environments, which can stimulate emotions in people and can even affect human vision [10]. On the other hand, the phenomenon of light in general and daylight, in particular, is one of the most basic physical and psychological needs of humans. Studies show that intensity, type of source, color, direction, and distribution of light in different environments of human activity may affect behavior, mood, productivity, and efficiency largely [11]. In architectural spaces, the lighting environment is an important factor in physiological and psychological effects. As for life, recent studies show that many people spend most of their time at home, and environmental studies have focused on the production of high-performance lighting and color rendering to achieve visual satisfaction in residential environments [12]. Light has a long history in Iranian architecture, so that the light of the

experience of Iranian houses has been the voice of architectural text and is still considered in Iranian architecture. Studies show that visual perception of each color and light is different and it is important to consider this item in design of residential spaces in order to provide peace and reduce anxiety and mental disorders [13].

The present study tends to achieve a desirable residential environment, which can meet the needs of modern people due to their busyness and mental anxieties, and to design an environment where people can achieve a relaxing atmosphere considering psychological characteristics of the environment. Because a major part of one's life is spent at home, particularly during childhood, when every image around the environment is engraved on human mind and soul, or in adulthood when sensitive hours and moments of life such as hours of solitude and loneliness, or happiness and unhappiness usually happen at home. Undoubtedly, architecture of residential houses affects psyche of the people living in that house. Because the fact is that residential houses should be designed in a way that they are a place of peace for body and mind of the people living in those houses. This topic is important because if residential houses are designed desirably, they will have a positive and significant effect on the mood and psyche of the residents. As a result, lifestyles are better, intimacy is more, reducing crime, violence, divorce, etc. at home.

2 LITERATURE REVIEW

In addition to reviewing the views of scholars and theorists of architecture and environmental psychology, Eslami Mahmoodabadi et al. [14] tend to extract the factors that create peace from the perspective of Islam and adapt it to current spatial-behavioral patterns of the residents. Accordingly, this study addresses exhibition of peace in two common models of contemporary houses, including apartment houses and independent houses with courtyards. This study finally asserted that super meaning of peace and its different levels (physical comfort, mental peace and spiritual peace) is more evident in independent houses with courtyards than in apartments, which is also influenced by variety of spatial features and environmental capabilities existing in this model of houses compared to apartments.

Karmi and Hosseinpour [15] analyzed essentials of the Iranian house in traditional architecture; among physical features of the Iranian house, peace, which is one of the most important elements due to its importance for peace of users, was recognized in the past architecture, finding these elements effective in physical space of the contemporary house. The results show that the recognition and implementation of elements of the physical design of traditional Iranian house architecture played an important and influential role in the peace of its users, and modern architecture has not managed to preserve it. Modernism, i.e. forgetting one's own origins and adopting a Western way of thinking [26, 30], has shown its control over Iranian house architecture in a forced and commanding process.

In their study, Taghipour et al. [16] stated that economic status of people in current societies plays an important role in their tendency to live in apartments and turn it into a common pattern in urban housing. Meanwhile, living in these

spaces is associated with many problems such as increased vitamin D deficiency, overweight and decreased physical health, various social harms, decreased personal spaces and decreased mental health, which are threats to health of residents. According to World Health Organization, however, health means simultaneous provision of three physical, mental and social dimensions of people. Therefore, it seems that economic status of people has a direct and immediate effect on their quality of life and health. For this purpose, the current study tends to examine three dimensions of health in preferences of people with different economic status, when choosing apartment housing, and priority of influential components in their choice in these three areas. In other words, the current study tends to clarify which aspect of health is the priority in people preferences in choosing housing and whether economic status of people is effective on their preferences. The results of this study show that economic level of people is effective on their preferences in choosing housing from the health aspect. In this way, attention to mental health indicators is at the highest level in selection of housing for all economic groups; with increase in economic power of the household, attention to social health indicators surpasses physical health indicators. Farahani et al. [17] investigated the perceived sense of peace in traditional houses of Iran through a case study on the House of Tabatabais in Kashan and found a relationship between architecture of these houses and the perceived sense of peace. Finally, they compiled the factors of sense of peace in spaces of the houses; given the lack of peace in current houses, they recommended the principles and basics of their design.

Haghju et al. [18] reviewed design methods used to create peace in houses through a case study on a design by creating peace in houses of Tabriz city; they investigated housing as a space for living, and peace as one of spiritual and psychological needs of every person. Finally, they concluded that interior architecture could help considerably in creating peace by inducing a sense of peace in the home.

Sheykh Al-eslami et al. [19] examined the effect of natural light on user comfort, survival and physical, mental and moral health in residential spaces through a case study on bedrooms. They concluded that light is the most non-material tangible element of nature and one of the effective factors on spatial value. Salehipour and Gholampour [20] investigated the environmental psychology in design of residential complexes and considered human behavior in physical environments and indicators of environments that cause social interactions. As a result, they identified human needs, which orient behaviors in collective spaces; by examining these needs, they increased mental peace in these spaces. Safari and Qaraguzlu [21] examined the effect of natural light on human peace in residential complexes, through a case study on Kausar residential complex in Sohank neighborhood in northeast Tehran. The results indicate that natural light has psychological effects on people. That is, psychologically, the ego dimension of human beings, the need to belong, self-esteem and self-actualization have the greatest effect on people. Radwan [10] investigated whether color is just an aesthetic value or a real human need. In this study, color is considered as an integral element. They concluded that the environment is made not only in living

organisms from the natural environment but also in humans. Different environments with their different colors play an important role in human evolution. Kellett and Moore [22] concluded that a hotel room leads to different behaviors and meanings attributed by the occupants. The meaning of home for some is more related to social dimensions, while for others it is more related to comfort and physical features. Therefore, housing design can be improved when the relationships between physical environment and various meanings of the home are better understood.

Lewinson [23] found that long-term hotel dwellers positively emphasize options that make room use more home-like. For example, a small kitchen in the room increases dignity. Overtoom et al. [24] investigated the design of a better house for people in temporary accommodation (investigating the relationships between the meanings of house, activities and indoor quality). Professionals involved in the design process, whether for new or renovated buildings, rarely consult with the people who live in short-term rental (temporary) apartments. Knowing what temporary residents need to feel at home and how their meanings of home are related to home features, activities, and the quality of indoor space can lead to better design for these typically small homes. To investigate views of temporary residents on their home environment, a survey was designed and administered to Dutch youth likely to be familiar with temporary accommodation (141 university students, 58 refugees who received a residence permit). Multiple regression analysis and analysis of variance showed that the meaning of house is related to some characteristics of household and presence of light and cleanliness. This study showed that significant house measurement might help to understand not only how houses are used, but also how to improve the design of small temporary houses.

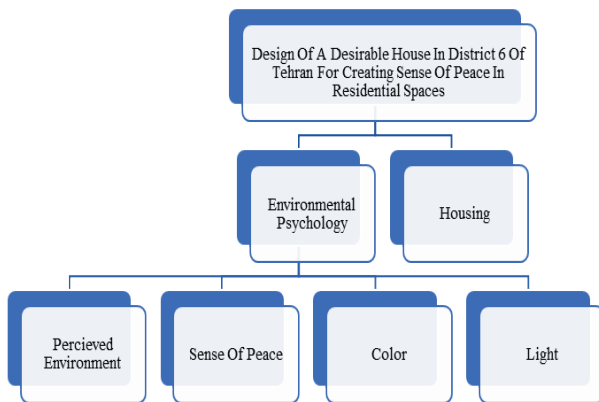


Figure 1 The conceptual model

This study is a step towards proper design of a residential complex, considering simple lines and use of less broken lines in design of the building form, as well as areas and separating them from each other, considering right colors for each space according to its type of function, considering suitable lighting for spaces to create a sense of vitality and considering natural resources. Fig. 1 shows the conceptual model of the study.

Research Questions are as follows: 1) Can peace be increased in residential environments by considering appropriate forms and psychological features? 2) Can peace

be created in residential environments by considering light and color features?

3 RESEARCH METHODOLOGY

The research method is analytical and descriptive; data collection method is library and observation using written and internet references and documents [25]. In this applied research, a mixed quantitative and qualitative method was used, the quantitative part of which was done with a descriptive survey and the qualitative part of which included case study. For literature review, data was collected and criticized from articles, treatises, and textbooks, and theoretical framework was developed to extract variables and develop the objective table; then, the questionnaire was developed and surveyed in the area [27-38].

The instrument used for collecting the required data was a questionnaire made by the author, which was designed based on two components, residential complex and sense of peace, and its effect on satisfaction of residents in District 6 of Tehran. A questionnaire with 10 questions was made after consultation with experts. In order to measure reliability of the questionnaire, 50 questionnaires were distributed among the statistical population. According to the calculated value, the alpha value was higher than 0.7 (Tab. 1), indicating that the questionnaire had the necessary reliability or validity to collect data and information.

3.1 Population

Statistical population of the study was residents of a residential complex in district 6 of Tehran. Among them, 50 people were selected for statistical sample by cluster sampling method and the questionnaire was distributed among them. Then the completed and returned questionnaires were analyzed.

Table 1 Reliability of the reference questionnaire

Variable	N	Cronbach's alpha
Residential complex	4 items	0.890
Resident sense of peace	6 items	0.855

3.2 Data Gathering

This study was done with the focus on two components, residential complex and sense of peace and its effect on satisfaction of residents in district 6 of Tehran. Residential complex indicators mean considering simple lines and less use of broken lines in design of the building form and considering the areas and separating them from each other, which are used in design of the residential complex and make the residents feel peace, followed by satisfaction of residents. Color, light, perception and environmental psychology are factors of satisfaction and sense of peace of residents.

3.3 Data Analysis Method

The research method in this study is descriptive analytical method. The method of data analysis is deductive reasoning. SPSS software was used to analyze the

questionnaire and obtain the weighted average of each question for comparison and evaluation [35].

4 RESULTS

Characteristics of the statistical samples are listed in the table below in terms of gender (30% male and 70% female), education level (32% diploma, 46% bachelor's degree, and 46% master's degree and above) and age (7% younger than 20 years, 38% between 21 and 35 years and 55% between 36 and 45 years).

Description of the variables for both indicators, residential complex and resident sense of peace, is described in Tab. 2.

Table 2 Description of residential complex and resident sense of peace

	N	Min.	Max.	Mean	Std.	Variance
Residential complex	50	1.50	5.00	3.2100	0.79597	0.634
Resident sense of peace	50	2.00	5.00	3.3200	0.70537	0.498

In order to measure the significant effect of each variable, hypothesis testing was conducted and the results are described in Tabs. 3 to 4.

Hypothesis 1: By considering appropriate forms and psychological features, peace can be increased in residential environments.

H₀: $R = 0$ there is no correlation.

H₁: $R \neq 0$ there is a correlation.

Table 3 Results of Hypothesis 1

	Residential complex	Resident sense of peace
Appropriate form and psychological feature	1	0.614**
Pearson correlation (residential environment)	0.614**	1

** $p < 0.01$

According to the results obtained from Tab. 3, the relationship between these two variables is significant ($p < 0.01$). On the other hand, the value of this relationship is equal to 0.614, which is positively significant.

Hypothesis 2: By considering light and color features, peace can be created in residential environments.

H₀: $R = 0$ there is no correlation.

H₁: $R \neq 0$ there is correlation.

Table 4 Results of Hypothesis 2

	Traditional architecture	Sense of place in architecture
Color and light	1	0.623**
Pearson correlation (peace in residential environment)	0.623**	1

** $p < 0.01$

According to the results obtained from Tab. 4, the relationship between these two variables is significant ($p < 0.01$). On the other hand, the value of this relationship is equal to 0.623, which is positively significant.

4.1 District Six of Tehran

District six of Tehran municipality with a population of 231024 people and an area of 2144 hectares is connected to the Hemet highway from north, to the Enghelab-Azadi Street from south, by Modarres highway on the eastern border, and to the Shahid Chamran highway from west.

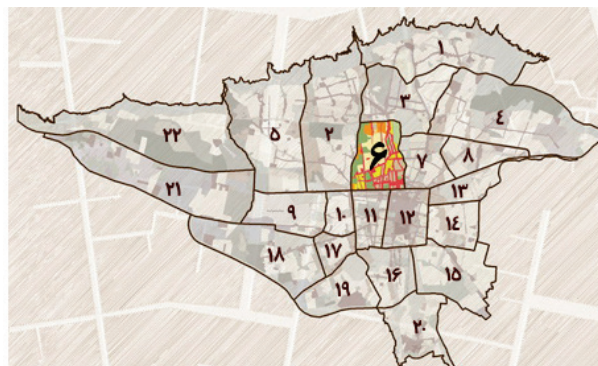


Figure 2 District 6 of Tehran on the map of Tehran; Source: Detailed plan of District 6 of Tehran

On the one hand, District 6 is located approximately in the geographical center of Tehran city, and on the other hand, it is in the spatial-activity center due to its proximity to the old center of gravity of the city and gradual transfer and movement of Tehran center to the north. In the meantime, with construction of elements such as the Ministry of Agriculture in the current Keshavarz Blvd., administrative buildings in the Taleghani and Iranshahr streets, and new urban centers in a more limited functional scale along the streets or intersection of main streets of the city, such as Enghelab and Valiasr squares, which were located in District 6, the district has taken a double central position (Detailed plan of District 6 of Tehran).

The population of District 6 in 2006 was counted as 232,583 people, while population peak was 258,838 people in 2007, after which, the population began to gradually decrease. In terms of social quality, population of the district includes social groups, which are higher than average; in terms of education, some blocks, and neighborhoods of the district are among the best ones in the city. The stabilization period of population has been associated with an increase in its activity so the number of employees in the district has increased from 239,945 people in 1994 to 283,148 people in 2002. The district covers 3% of area, 3.1% of population and 17.6% of employees of Tehran. Gross population density is 108 and gross density of employees is 132 people per hectare (Detailed plan of District 6 of Tehran).

4.2 Building Structure

The building structure is an eco-friendly metal structure. Then, a series of resins were used for the structure so that no moisture penetrates it and it does not corrode by growth of plants and in fact, it is insulated. Then wood plastic composite was used on the structures. The plants on the structure were forest plants and tended to grow on the facade. The facade of the windows was in the form of curtain wall

and glass, and cement board or dry concrete was used in the walls, and behind them, gypsum panel insulation, mineral wool, and kenaf were used, respectively. All the materials of this residential complex are light. Western light was solved with expanded metal or stretch metal technology due to sunlight problem. Expanded metal is an aluminum mesh which is able to absorb 50% of natural light and allows growing plants on this material. The site is located in the 6th district of Tehran, Iranshahr neighborhood, one of the neighborhoods of Tehran. This site with 12841 m² area is located on Mousavi Street and a dead end (Fig. 3).



Figure 5 Site adjacencies



Figure 3 Site location, source: author

Reasons for Choosing the Site are as follows: Artist House located in Iranshahr Park (Artists) is one of the historical-artistic monuments in Iranshahr neighborhood. It has relatively healthy weather. Easy access to this district by public transportation (taxi, bus and subway) and by personal vehicles is one of advantages of this area. On the other hand, beautiful and old trees, green boxwoods, and ditches have given a beautiful effect to Iranshahr neighbourhood. The selected site is located in a place that, in addition to being cozy and having good air, is on a wide street and alley where you can experience silence and peace (Fig. 4).



Figure 4 Usage and various features around the site; source: author

The site is adjacent to residential and administrative buildings, galleries, restaurants and cafes, green spaces and artists park (Fig. 5). The suggested physical plan is shown in Tab. 5. View from outside to the site and View from the site to outside are shown in Figs. 6 and 7 respectively.

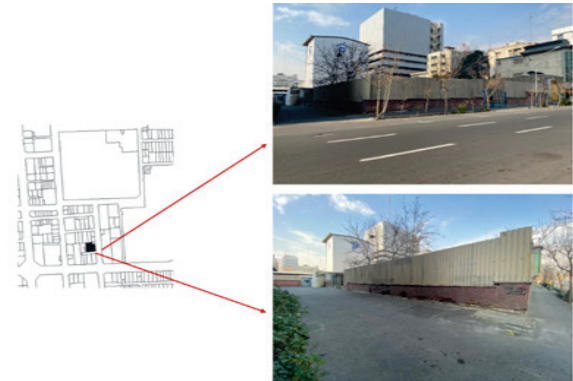


Figure 6 View from outside to the site



Figure 7 View from the site to outside

5 CONCLUSION

The increasing population and the following transformation of apartment living into the dominant form of urban housing, have created new outcomes and challenges in the field of mental health of humans. One of the most important missions of the house is to provide peace for its residents. This is so important that God Almighty has directly emphasized the comforting role of the house in the Qur'an. On the other hand, man is a creature with different egos, and the concept of peace is expressed in a special way for each ego. In this way, peace in connection with the plant and animal ego of man is manifested in the form of physical comfort; the rational ego needs to provide mental peace, and the spiritual ego of man seeks the concept of peace in spiritual peace. Considering that the house is the residence of all

human egos, it is essential to provide different levels of peace according to the four human egos.

Table 5 Physical plan

Name of spaces	Area of space	N	Total area
Lobby	20	3	60
Parking	7	83	581
Warehouse	3	57	171
Facilities	28	2	56
Stairs	9	4	36
Elevator	3	4	12
Maintenance	60	1	60
			Total: 976 m ²
One-bedroom unit			
Restroom	2	1	2
Bathroom	3	1	3
Kitchen	8	1	8
Living room	20	1	20
Bedroom	12	1	12
Total in number of units: 45 m ²		Number of units: 1	Total: 45 m ²
Two bedroom unit			
Restroom	2	1	2
Bathroom	4	1	4
Kitchen	12	1	12
Living room	30	1	30
Master room	16	1	16
Bedroom	9	1	9
Total number of units: 1168 m ²		Number of units: 16	Total: 73 m ²
Three bedroom unit			
Restroom	3	1	3
Bathroom	4	2	8
Kitchen	16	1	16
Living room	80	1	80
Master room	20	1	20
Bedroom	12	2	24
Total number of units: 4077 m ²		Number of units: 27	Total: 151 m ²
Four bedroom unit			
Restroom	3	1	3
Bathroom	6	3	18
Kitchen	20	1	20
Living room	100	1	100
Master room	30	1	30
Bedroom	16	3	48
Total in number of units: 438 m ²		Number of units: 2	Total: 219 m ²
		Total units: 46	Total area: 1464 m ²
			Total building area: 11296 m ²
			Total site area: 12841 m ²

It seems that knowledge of physical and mental characteristics and understanding of the different needs of the elderly and an attempt to respond to these needs and respect for their preferences in designing and improving their special spaces can be effective in the good life of the elderly and improve their quality of life and life expectancy. This study tends to evaluate architectural spaces for the elderly to improve their quality of life. In this study, it was found that the factors and elements that lead to a sense of peace and comfort, and satisfaction of residents of the residential complex are known as indicators of the residential complex

and residents' sense of peace. Based on the findings of the field studies and extracted data from the questionnaire, it was determined that indicators of the residential complex and residents' sense of peace have a significant effect on the satisfaction of the residents of the residential complex ($P < 0.01$). Hence, indicators of the residential complex and residents' sense of peace have a significant effect on the satisfaction of the residents of the residential complex in district 6 of Tehran with 95% confidence. Considering simple lines and less use of broken lines in the design of the building form and considering the areas and separating them from each other as well as color, light, perception, and psychology of the environment are factors that lead to a sense of peace and satisfaction of residents of the complex.

6 REFERENCES

- [1] Noghrekar, A., Hamzenejad, M., & Baqeri, H., (2013). Sociability in the Iranian courtyard (recognizing the reinforcing features of presence in the courtyard, through the analysis of movie scenes). *Journal of Iranian Architecture & Urbanism*, 12(1), 45-56.
- [2] Askarizad, R. & Safari, H. (2020). Investigating the role of semi-open spaces on the sociability of public libraries using space syntax (Case Studies: Sunrise Mountain and Desert Broom Libraries, Arizona, USA). *Ain Shams Engineering Journal*, 11(1), 253-264. <https://doi.org/10.1016/j.asej.2019.09.007>
- [3] Emami, B. D., Song, Y., & Khani, A. (2022). Prioritizing Bus Routes for Electrification: GIS-Based Multi-Criteria Analysis Considering Operational, Environmental, and Social Benefits and Costs. *Transportation Research Record*, 2676(8), 10-23. <https://doi.org/10.1177/03611981221082565>
- [4] Varolgünes, F. K. (2019). Evaluation of vernacular and new housing indoor comfort conditions in cold climate—a field survey in eastern Turkey. *International Journal of Housing Markets and Analysis*, 13(2), 207-226. <https://doi.org/10.1108/IJHMA-02-2019-0019>
- [5] Chen, N., Hall, C. M., Yu, K., & Qian, C. (2019). Environmental satisfaction, residential satisfaction, and place attachment: The cases of long-term residents in rural and urban areas in China. *Sustainability*, 11(22), 6439. <https://doi.org/10.3390/su11226439>
- [6] Pourmehdi Ghaem Maghami, H., & Khaki Ghasr, A. (2022). The Inside-Outside Relationship of Traditional Houses: A Case Study from Yazd, Iran. *Iran University of Science & Technology*, 32(4), 1-22. <https://doi.org/10.22068/ijaup.727>
- [7] Abbas Mofrad, H., Khalatbari, J., Malihi Zakerini, S., Mohammadi Shirmahalleh, F., & Shafti, V. (2021). Analysis of Structural Equations in the Relationship of Marital Conflicts and Affective Security with Perceived Stress and Pregnancy Worries and Biological Indexes with the Mediation of Psychological Wellbeing in Pregnant Women. *Women Studies*, 12(35), 97-127.
- [8] Seitz, C. M., Reese, R. F., Strack, R. W., Frantz, S., & West, B. (2014). Identifying and improving green spaces on a college campus: A photovoice study. *Ecopsychology*, 6(2), 98-108. <https://doi.org/10.1089/eco.2013.0103>
- [9] Torres, A., Serra, J., Llopis, J., & Delcampo, A. (2020). Color preference cool versus warm in nursing homes depends on the expected activity for interior spaces. *Frontiers of Architectural Research*, 9(4), 739-750. <https://doi.org/10.1016/j.foar.2020.06.002>

- [10] Radwan, A. H. (2015). Color in architecture is it just an aesthetic value or a true human need. *International Journal of Engineering Research & Technology (IJERT)*, 4, 523-533.
- [11] Murdoch, L. C., DeWolf, S., Germanovich, L. N., Moysey, S., Hanna, A., Roudini, S., & Moak, R. (2023). Using the Shallow Strain Tensor to Characterize Deep Geologic Reservoirs. *Water Resources Research*, 59(2), e2022WR032920. <https://doi.org/10.1029/2022WR032920>
- [12] Kim, I. T., Choi, A. S., & Sung, M. K. (2017). Development of a Colour Quality Assessment Tool for indoor luminous environments affecting the circadian rhythm of occupants. *Building and Environment*, 126, 252-265. <https://doi.org/10.1016/j.buildenv.2017.10.009>
- [13] Fattahi Marnani, P. & Cuocci, S. (2022). Foreign Language Anxiety: A Review on Theories, Causes, Consequences and Implications for Educators. *Journal of English Learner Education*, 14(2), p. 2. <https://stars.library.ucf.edu/jele/vol14/iss2/4>
- [14] Eslami Mahmoodabadi, M., Peyvastegar, O., & Heydari, A., (2021). Peace at home, a search for peace at home from the perspective of Islam in two models of apartment and independent housing with courtyard in Kerman city. *Baghe Nazar*, 18(99), pp. 5-24.
- [15] Karami, R. & Hosseinpour, E. (2020). Home, a medium to reach peace. *Research in Civil Engineering*, 60, 182-207.
- [16] Taghipour, M., Heidari, A., & Haghayegh, M. (2020). Evaluating the effects of health components on choosing the optimal rental housing among citizens of Shiraz. *Motaleate Shahri*, 9(36), 55-68. <https://doi.org/10.34785/J011.2021.299>
- [17] Farahani, F., Zekavat, M., & Momenian, A., (2017). Investigating the perception of the sense of peace in traditional Iranian houses; a case study: The Tabatabai house in Kashan. *International conference on modern studies in civil engineering and urban planning with the approach of Islamic Iran*, Tehran, Iran.
- [18] Haghju, A., Tarahomju, A., & Mosafere, S., (2017). Design methods to create peace in houses; a case study: design by creating peace in houses of Tabriz. *International congress of civil engineering, architecture and contemporary urban planning of the world*, Tehran, Iran.
- [19] Sheykh Al-eslami, A., Niazi, S., & Qavami, A., (2017). The effect of light on user comfort in residential spaces' a case study: bedroom. *Annual conference on urban planning architecture and urban management research*, Tehran, Iran.
- [20] Salehipour, A. & Gholampour, M., (2016). Environmental psychology in design of residential complexes. *The first national technology conference in applied engineering club of young and elite researchers*, Tehran, Iran.
- [21] Safari, H. & Qaraguzlu, S., 2016. The effect of natural light on the peace of people in residential complexes, a case study of Kausar residential complex in Sohank neighborhood in the northeast of Tehran. *The second annual conference on urban planning architecture and urban management research*, Teran, Iran.
- [22] Kellett, P. & Moore, J. (2003). Routes to home: homelessness and home-making in contrasting societies. *Habitat International*, 27(1), 123-141. [https://doi.org/10.1016/s0197-3975\(02\)00039-5](https://doi.org/10.1016/s0197-3975(02)00039-5)
- [23] Lewinson, T. (2010). Capturing environmental affordances: Low-income families identify positive characteristics of a hotel housing solution. *Journal of Community & Applied Social Psychology*. <https://doi.org/10.1002/casp.1060>
- [24] Overtoom, M. E., Elsinga, M. G., & Bluyssen, P. M. (2022). Towards better home design for people in temporary accommodation: exploring relationships between meanings of home, activities, and indoor environmental quality. *Journal of Housing and the Built Environment*, 1-27. <https://doi.org/10.1007/s10901-022-09947-z>
- [25] Abbas Mofrad, H., Khalatbari, J., Malih Al-zakerini, S., Mohammadi Shir Mahalla, F., & Shafti, V. (2022). Modeling Structural Equations in the Relationship between Marital Conflicts and Emotional Security with Perceived Stress and Prenatal Concerns with Psychological Well-Being in Pregnant Women. *Middle Eastern Journal of Disability Studies*, 12(140), 1-8. <https://jdisabilstud.org/article-1-2259-en.html>
- [26] Abedi, M., Tan, X., Klausner, J., & Benard, A. (2022). Solar Desalination Chimneys. *Bulletin of the American Physical Society. The 75th Annual Meeting of the Division of Fluid Dynamics*. November 20-22, 2022; Indiana Convention Center, Indianapolis, Indiana. <https://meetings.aps.org/Meeting/DFD22/Session/S01.13>
- [27] Cuocci, S., & Fattahi Marnani, P. (2022). Technology in the Classroom: The Features Language Teachers Should Consider. *Journal of English Learner Education*, 14(2), 4. <https://stars.library.ucf.edu/jele/vol14/iss2/4>
- [28] Khorsandi, H., Khorsandi, R., Khorsandi, M.A. (2022). Effects of multimedia (motion graphics) versus traditional teaching method on student learning. *International Journal of Early Childhood Special Education*, 14(2), 9115-9124. <https://doi.org/10.9756/INTJECSE/V14I2.995>
- [29] Murdoch, L. C., Germanovich, L. N., Roudini, S., DeWolf, S. J., Hua, L., & Moak, R. W. (2021). A Type-Curve Approach for Evaluating Aquifer Properties by Interpreting Shallow Strain Measured During Well Tests. *Water Resources Research*, 57(9), e2021WR029613. <https://doi.org/10.1029/2021WR029613>
- [30] Khorsandi, H. & Khorsandi, R. (2022). Ranking the effective factors in creative marketing in Iran Novin insurance. *Journal of Positive School Psychology*, 6(5), 10009-10020.
- [31] Esmailzadeh, Y. (2023). Potential Risks of ChatGPT: Implications for Counterterrorism and International Security. *International Journal of Multicultural and Multireligious Understanding*, 10(4), 535-543.
- [32] Heydari, P., Asgharpour, A. R., Nazoktabar, M., & Zahedinejad, M. (2014). Fabrication and Optical Characterization of Silicon Nanostructure Arrays by Laser Interference Lithography and Metal-Assisted Chemical Etching. *Journal of Nanostructures*, 4(4), 419-424. <https://doi.org/10.1016/j.renene.2022.11.069>
- [33] Shakouri Mahmoudabadi, N. (2021). The Use of Viscous Dampers for Retrofitting of Reinforced Concrete Frames. *Turkish Journal of Computer and Mathematics Education*, 12(13), 7739-7744
- [34] Soltanmohammadi, R., Iraj, S., de Almeida, T. R., Munoz, E. R., & Vidal, A. C. (2022). Upscaling Challenges of Heterogeneous Carbonate Rocks: A Case Study of Brazilian Pre-Salt Analogous. *In Third EAGE Conference on Pre Salt Reservoirs, EAGE Publications BV*, 2022(1), 1-6.
- [35] Heidari, S., Zarei, M., Daneshfar, A., & Dokhanian, S. (2023). Increasing Sales through Social Media Marketing: The Role of Customer Brand Attachment, Brand Trust, and Brand Equity. *Marketing and Management of Innovations*, 14(1), 224-234. <https://doi.org/10.21272/mmi.2023.1-19>
- [36] Azizi, S., Dadarkhah, A., & Masouleh, A. A. (2020). Multi-Objective Optimization Method for Posture Prediction of Symmetric Static Lifting Using a Three-Dimensional Human Model. *Ann Mil Health Sci Res.*, 18(2), e104283. <https://doi.org/10.5812/amh.104283>
- [37] Vahid, R., Farnood Ahmadi, F., & Mohammadi, N. (2021). Earthquake damage modeling using cellular automata and

fuzzy rule-based models. *Arabian Journal of Geosciences*, 14, 1-14. <https://doi.org/10.1007/s12517-021-07595-1>

- [38] Abedi, M., Tan, X., Klausner, J. F., & Bénard, A. (2023). Solar desalination chimneys: Investigation on the feasibility of integrating solar chimneys with humidification–dehumidification systems. *Renewable Energy*, 202, 88-102. <https://doi.org/10.1016/j.renene.2022.11.069>

Authors' contacts:

Maryam Sabaroo, MSc student
Art and Architecture Department,
Yazd Branch, Islamic Azad University,
Yazd, Iran

Abazar Mehrali, Assistant professor
(Corresponding author)
Faculty of Architecture, Art and Architecture Department,
Yazd Branch, Islamic Azad University,
Yazd, Iran
abazarmehrli@chmail.ir