

## ALYZING A PROPER FLEXIBLE AND ADAPTABLE PATTERN FOR PROMOTING THE HOUSING QUALITY IN IRAN

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### ABSTRACT

Nowadays, recognizing the current requirements of the residents along with changing them according to different lifestyles is ignored in housing conditions. Such ignorance dissatisfies the residents and makes them to change their homes after entering a new lifecycle. This article is following the concept of housing in Iran via an analytical – descriptive research approach. According to the extracted findings of literature review, a flexible and adaptable home designing on the basis of the residents' requirements changes in their different lifecycles is one of the strategies to satisfy the residents and prevent them from changing their homes. Considering the increasing of inflation rate and the costs in Iran and decreasing the purchasing power, it can be said that offering a proper flexible and adaptable pattern for promoting the housing quality in Iran, would be the appropriate answer, especially in high-rise residential buildings, composing the majority of the residential typology In Iran.

**Keywords:** *High-rise residential building, Lifestyle, Lifecycle, User Satisfaction, Adaptability, Flexibility, Home,Iran*

### INTRODUCTION

This research is part of a bigger research, which is an M. A. thesis of second author by supervision of the first author, called "Evaluating the influence of space adaptability and flexibility on promoting users' satisfaction in high-rise residential buildings in Mashhad, Iran".

Some human and environmental factors should be considered to prepare an appropriate built environment concentrating on human needs (Salim et al., 2012; Carmona et al., 2010; Madanipour, 2007). In this regard, home is known as base of human activities. Growing population has influenced demands for new concept of home ignoring demands for new and existing one in developing countries, such Iran (Bakhtyar et al., 2012). The meaning of the word "Home" has undergone fundamental and basic changes in recent years, which has eminently changed the form of Iranian families and their lifestyles as well. Housing development and house building have been accelerated and mass housing is considered by the people in charge –which has many consequences– due to paying lots of attention to economic issues and population increase in Iran. Reducing the home size and mass housing was introduced in Europe for the first time. And a certain goal was followed. It was known that what kind of people are supposed to live in such residences and the lifestyle of the mentioned people was clear to the architects and engineers. But in Iran, the same process was started without paying any attention to Iran society and quality of the people's life or occupation (Bavar, 2011). Mass housing popularity instead of adopted houses with the family requirements has led to inflexibility of the residential areas. The reason is that there is almost no direct relation between the architects and users either in designing or in mass

housing procedures. Lack of this relation complicates the difference between the routine and real requirements. It can be said that mass housing is a proper response for routine requirements of people, not their upcoming ones.

Using the home users' ideas in planning and designing processes is a solution to find out a relation between the people's expected requirements and their upcoming ones. It increases the home adaptability with the users' requirements and their satisfaction consequently. Providing the flexibility and adaptability in the spaces according to personal tastes is a feature of an ideal home. In Iran traditional architecture, such cooperation was feasible because of a direct relation between the architect and the user and familiarity with the dominant ordinary lifestyle (Einifar, 2003). Nowadays, the designers' ignorance and lack of any awareness of the users' requirements when choosing a home and over their lifetime lead to the residents' dissatisfaction and can be considered as one of the most important problems of housing in Iran. Mentioned dissatisfaction brings about moving to new houses and some mental, social and economic problems consequently. Therefore, it looks vital to evaluate and distinguish users different lifestyles and different probable changes which occur during their different lifecycles to design a dwelling on the basis of this recognition, considering the flexibility and adaptability, in order to satisfy the residents and improve the housing conditions in Iran; pointed out concepts are discussed in this study. Actually, analyzing a flexible pattern in housing with a proper spatial quality in Iran is the main goal of this study.

## LITERATURE REVIEW

As this research is held in housing field and to be more specified, "improving housing quality in Iran", it is divided to different parts as follow:

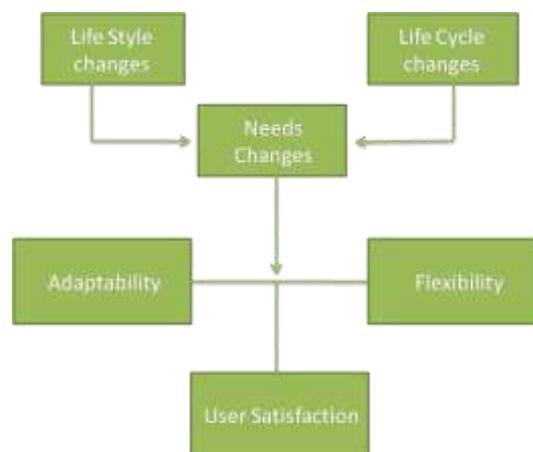
- A. Evaluating the changes of "Home" concept and the family form in recent years in Iran
- B. Evaluating the involving issues in the residents' satisfaction of "Home"
- C. Evaluating the lifestyle concept and its effects on promoting the housing conditions
- D. Evaluating the lifecycle concept and its effects on promoting the housing conditions
- E. Evaluating the relation between the residents' satisfaction and promoting the housing quality
- F. Evaluating flexibility and adaptability as two different concepts and quality of promoting the housing conditions on the basis of these factors

A) Evaluating the changes of "Home" concept and the family form in recent years in Iran  
Many descriptions are suggested for "home". Home is a place where we back to after experiencing various aspects of the world. "Dwelling" is so important that can be called as the center of the person's world (Shultz, 1993). "Home" is the corner of our world. It is our first world (Bachelord, 1994). Considering all these definitions and since people begin and end their lives at home, it should be considered importantly. Various factors have been involved in changing the concept of "Home" in Iran. Changing the lifestyle has changed "Home" and "Dwelling" as "Residential unit" and "settlement" (Ha'eri, 2000). Changing the lifestyle affects all aspects of the people's life, including social, political, cultural and economic aspects. These changes can be seen much easier among young people and bring about changing dwelling concept. Not being prepared for facing with a new technology, which is car, is one of the most important factors in changing the concept of "Home" in Iran. Emerging wide roads, asphalt and light post have changed Iranian cities fundamentally, without being prepared for it. Pointed out phenomenon is one of the most important factors in changing the people's lifestyle and substituting the "Replacement" instead of "Renovation" (Ha'eri, 2000). Simultaneously, Iranian architects, who had studied abroad, came back to Iran gradually and supported such changes without considering the history by developing new spatial patterns. Since all mentioned changes accompanied the technology and modern welfare, they were welcomed by the last generation. On the other hand, the form of Iranian

families was changing as well; grandchildren do not live in the same home as their grandparents did anymore. Homes became more comfortable and smaller, and so did the families. But omitting the “space mobility” is a deficiency, which has been mentioned a lot by the former generation in different interviews and questionnaires ( Haeri, 2000). According to Pirnia, “Dwelling is a place where no tiredness is felt and inside home, where the women and the children are living in, should be diversified.” So it can be said that by changing the house form, lifestyle and the family form in Iran today’s housing should be able to respond the users’ expectations and be adapted to different residents’ needs.

#### B) Evaluating the involving issues in the residents’ satisfaction of “Home”

Nowadays, many factors are involved in the residents’ dissatisfaction in Iran, which are listed briefly as follow. Paying lots of attention to economic issues and mass housing in Iran is one of these factors. “Homes are seen as residential blocks behind some monotonous windows, which cannot be distinguished even by the owners, let alone to the guests” (Pakzad, 2010). Paying lots of attention to economic issues and population growth has accelerated the building process and as a result the people’s requirements are not taken into consideration in this procedure. All these changes in Iranian housing system and mass housing bring about many consequences, such as lack of attention to the residents’ requirements, which leads to their dissatisfaction of their living place (Einifar, 2003). On the other hand, a mixture of housing traditions along with economic necessities and environmental difficulties forces the family to look for a proper response to its essential requirements in a place with minimum living space. In Iran, most minimum housings cannot afford their owners’ requirements vividly. Not having enough space in some elements causes some improper eliminations or merging and affects the welfare of the family members. Such factors dissatisfy the residents of their own dwelling (Borhani, 2007). All priorities and revisions should be considered by the architect in order to build a house successfully. In the modern life, in technology era, people are more aware of their houses qualitatively rather than quantitatively; and it increases their dissatisfaction from the housing conditions (Ozsoy, 1996). The home space should afford all defined expectations of the people, even those which are not aware of. Ignoring such issues affects the life quality. Inflexibility, imposing the space, improper spaces for our desired activities and no adaptability with the residents’ requirements in various lifecycles increase the environment monotony and dissatisfaction from the housing system (Tafakor, 2005). Thus, it can be said that mass housing has brought about ignoring the residents’ upcoming requirements and since the houses are not able to afford their owners’ upcoming expectations, the housing quality is being reduced gradually and it increases the people’s dissatisfaction from their housing system (Analytical diagram 1).



**Analytical diagram 1:** title: factors affecting users’ satisfaction with housing- Reference: The authors

The residents’ dissatisfaction brings about instability and moving to new places, which causes irretrievable mental, social and economic damages (Tafakor, 2005). As it pointed out

earlier, minimum-housing system has dissatisfied people and brought about instability in this field. But it should be considered that most of the residents' requirements could be answered in a small area by a flexible designing and using the dwelling spaces optimally (Borhani, 2007). Since the mental, social and economic damages, which have been brought about by moving to new places-which is due to the residents' dissatisfaction of their housing condition-, it should be tried to minimize such moving. Flexible and adaptable designing increases the residents' satisfaction and can be considered as a strategy to answer the moving problem in Iran.

C) Evaluating the lifestyle concept and its effects on promoting the housing conditions  
The concept of "Home" cannot be defined as a skeleton in interior spaces, but the "Concept" clarifies it. "Concept" can be found in using different spaces in our routine life. Places are meaningful and "Home" is the center of daily activities (Zukin, 1995). How to apply available places is a cultural phenomenon; because targeted use of residential places leads to some principles that clarify the difference between the "Dwelling" and "Home" (Lawrence, 1995). Home is a safe place that provides the human comfort and expectations and represents his/her identity. Therefore, dwelling practices can be referred to as a process that is able to turn a dwelling into a home (Lawrence, 1995). Thus such places afford most of their owners' values. It can be said that in designing, different subjects and their concepts are considered much more important than the function (Chaney, 1996). On the other hand, architects and planners should regard "Concept" as a product of environmental perception; most of the time, there is wrong viewpoint about the difference between "function" and "Concept". "Concept" should not be considered as important situations of function only; it offers the most important qualitative and vital role of "Created Environment". Since special conditions in behavioral systems bring about special behaviors and lead to different and separate environments, which are deduced from the relation between the culture and the environment. Hence, the lifestyle and behavioral systems exist in analyzing the environment simultaneously (Pourdeihimi, 2011). So it can be claimed that the individual's behaviors and the style of using different spaces form the places, and the adjusting the places and homes with individuals' values brings about their satisfaction of their residential environment. (Analytical diagram 2).



**Analytical diagram 2:** Title: The difference between house and home- Reference: The authors

There is a close relation between the lifestyle evaluation and space perception. Lifestyle is used to understand, recognize and predict the surrounding incidents and adapt them to human values (Blackwell, 2000). Considering this point that how to use the life spaces in the routine life is a key point, which can clarify the life environment (Lawrence, 1995). Lawrence explains that how to analyze the behavioral systems and activities in residential areas in order to understand the hidden concepts in designing homes. Life costumes, which play a key role in mentioned relation, can be applied to discover new strategies for using spaces. Therefore, it can be claimed that the users' behaviors can be predicted by evaluating the individuals' lifestyles. And it is an important point to satisfy the users.

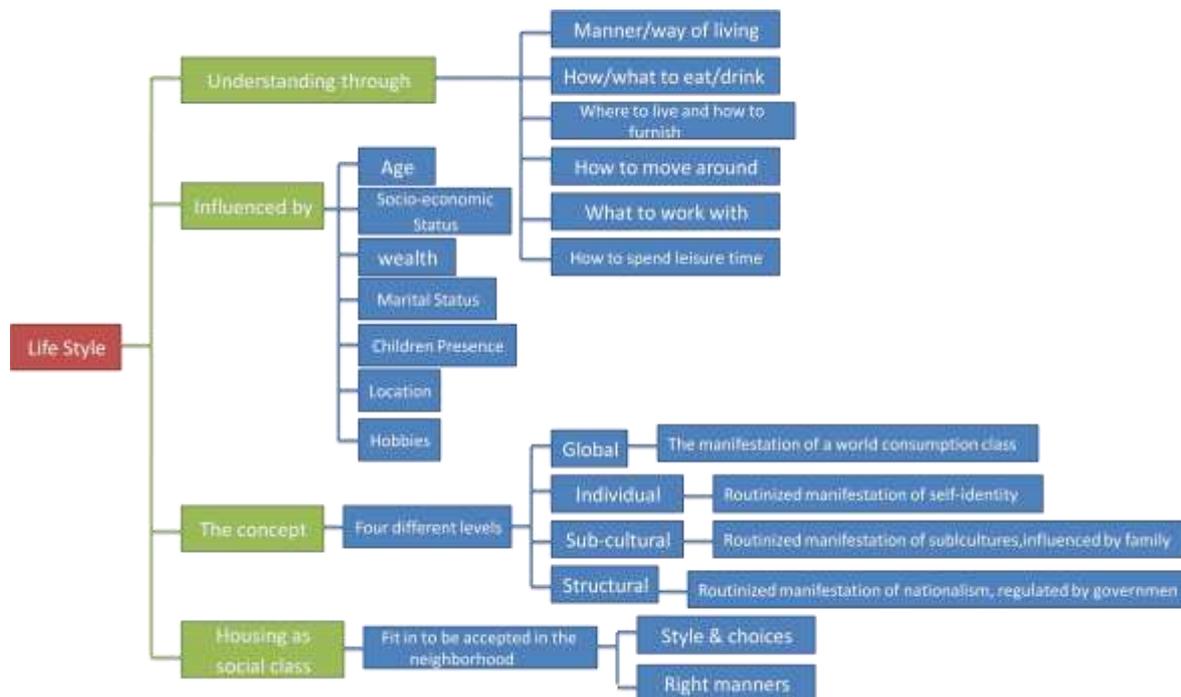
Lifestyle and understanding its concept is a vital point in residential areas and ignoring them brings about the residents' dissatisfaction. It possesses a significant role in designing the residential units and the users (Pourdehim, 2011). Different definitions are offered for

“lifestyle”. In sociology, it is a collection of common values. Routine life and behaviors are meaningful under a specific social circumstance. Some activities – like type and amount of individuals’ social relations, how to use the space, time, kind of family relationship, etc. – are different in various social-cultural backgrounds (Pourdehim, 2011). “Lifestyle” concept clarifies the kind of activities and the reason of doing them and their meaning to the users. Various factors are dealing with forming the “life style” including how to pass the leisure time, living place, how to furnish, what to watch and read, how to live, living arrangement (Jensen, 2008). “Lifestyle” can be defined as a set of behaviors and viewpoints in different fields (Chaney, 1996). Lifestyle, which is deduced from behaviors and behavioral systems, accompanies the cultural values (Poordehim, 2011). “Lifestyle can be considered as a set of routine practices like eating habits, dress, modes of acting, etc.”(Jensen, 2008). Thus, it can be resulted that knowing people’s lifestyle concept clarifies many important factors for the architects and designers to apply in their designing in order to improve the home quality.

Different lifestyles possess different features, which are formed under specific circumstances, each of which offer useful information to the architects or designers. These features are set because of being the member of various social groups, like age, gender, generation, class, race, tribe, clan, religion, education and ideology. These differences bring about different lifestyles, and needed information about each of these lifestyles can be understood via some patterns, like consumption pattern, eating habits, transportation, media, life activities, hobbies, leisure time, social connections and their requirement to pedagogical and social environments (Poordehim, 2011). So mentioned factors should be considered in order to improve the home quality and satisfy the residents.

Lifestyle can be divided into four different levels:

1. “ Structural level: It refers to similarities and differences between various countries, societies and cultures, as well as the differences evolving over time within one and the same society.
2. Sub-cultural level: It is affected by family, friends, and different types of social networks.
3. Individual level: Lifestyle is the routinized manifestation of self-identity (not the broader sense of identity used by, e.g. Castells 1997), regulated by the project of self and influenced primarily by friends and the media. According to Giddens (1991), the project is influenced by group pressure, role models and socio-economic circumstances.
4. Global level: World consumption classes are considered rather than the social or national classes in this level. Housing, where to live, is still a lifestyle that is connected to social class.” (Jensen, 2008). You have to fit in to be accepted in the neighborhood (Rapoport 2001). “Some behavior is not proper. In order to fit in you need the right manners, style and taste. It is probably obvious if you have the right background, sufficient means and education.” (Jensen, 2008). Individuals are free to choose in order to live in urban or rural areas, or in an apartment or a house (Rapoport, 2001). “In fact where you choose to live clarifies your requirements in life. Giddens (1991) refers to choices, how to behave, and be who you want to be; actually he refers to making and remaking self-identity.” (Jensen, 2008). Therefore, before evaluating the lifestyle, a specific level is required to be mentioned. Considering the matter of relation of lifestyle and housing with the environment and different kind of users, two levels seem more important; i.e. sub-cultural and individual. (Analytical diagram 3)



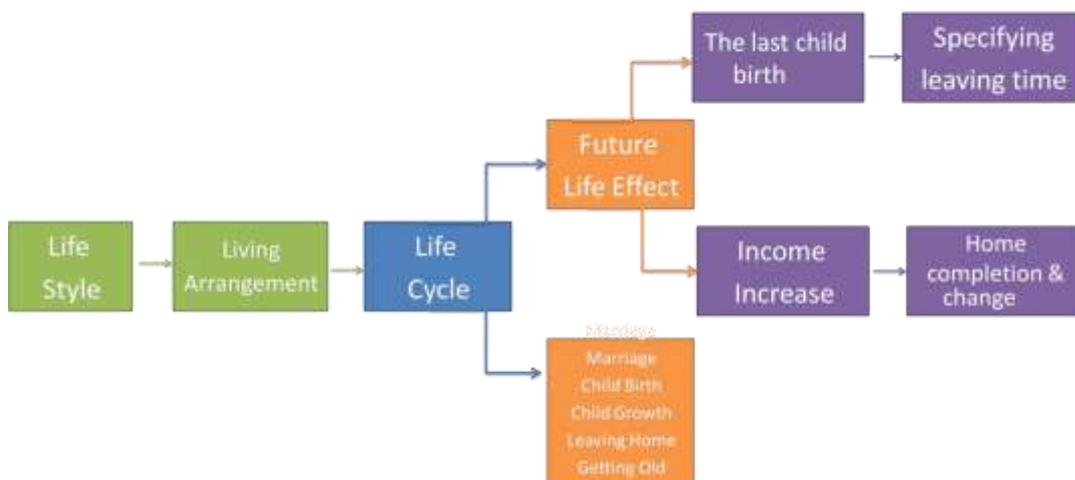
**Analytical diagram 3:** Title: Factors affecting on lifestyle concept- Reference: Authors

“There are two different points of view about lifestyle: The first group believes that lifestyle is the matter of expressing choices. But there are two problems in this point of view. First of all is there any clear border between choice and influence? Do we believe in our choosing right or are we influenced by other issues? Secondly, individuals’ self-expression is changeable. How often or how much can an individual change his/her self-expression and still call it a life style? Is it a lifestyle to change one’s self-expression often or constantly? Or could that be considered “Multi-lifestyles”? For instance, a person may change his/her clothes 4 times a day due to being in touch with different groups of people from various social classes. Is there any problem in this person’s lifestyle or simply it should be called “Multi-lifestyles”(Jensen, 2008)? Lifestyle is a consuming pattern, which reflects the individual’s rights in spending their time and money (Solomon, 2000). “ The second viewpoint looks at the lifestyle as a matter of beliefs and habits. There are two problems in this point of view as well. First, if lifestyle springs from a pattern of habits within an individual, why some of them – especially teenagers – change their lifestyle (like changing wearing habits, hairstyle, music, language and diet)? Secondly, changing the beliefs does not necessarily result in changing habits. For instance, a person may believe in this point that global warming is an urgent subject, but he/she may never try to change his/her habits. I want to suggest a solution to these conflicts, that lifestyle should be understood in terms of strategy and feedback. Before I do this, it should be explained that choice and habit are still relevant factors. The interaction between choice and habit is such that an individual needs to have a pattern of habits for some aspects of life, in order to have a sense of continuity, while it is more or less possible to vary other aspects of life. In some cases, habits are a result of imitation and in other cases, a result of well considered choices. The point about habit is that we should not have to think about it; that is one of its great benefits. A habit, then, is more or less something the individual is oblivious to.” (Jensen, 2008). According to the first point of view, the choosing right is considered a positive aspect, and according to the second point of view, the changing habits via the beliefs is considered a positive aspect (Jensen, 2008). “ The idea of being strategic is needed to gain feedback. For instance, if all members react a proper response and relieve the person, changing cloths depending on the social contexts can be positive if the other members provide positive feedback and make the individual feel comfortable.” (Jensen, 2008). Finally it can be said that the main goal of housing is to

prepare a proper environment according to individuals' lifestyles. Life style exists in people's mind and designing home on the basis of that brings about an ideal life.

D) Evaluating the lifecycle concept and its effects on promoting the housing quality  
As it was pointed out earlier, living arrangement is an important factor in lifestyle, whose changes can be figured out via the changes in lifecycle (Jensen, 2008). In fact developing the lifecycle changes housing demand, residents' requirements, etc. and ignoring such changes in house designing dissatisfies the residents.

There are many important factors in lifecycle, which should be considered by the architects and designers. There is a close relation between the profession and income raise and lifecycle. Increasing the income requires more spaces, which complete the housing (Jensen, 2008). Age is the other important factor. Being 30 affects the people's life drastically. Important decision – like having babies, job importance and education level – affects the lives at this age. Residents obtained educational degree and job clarify people's future work life. On the other hand, after the birth of the last child, the time of leaving home by all children can be guessed approximately, and this is affects people's lifecycle. There are some other involving factors, like marriage, divorce, childbirth, children growing up, separating the children from the parents and old ages, which play a crucial role in lifecycle, and home should be adapted with them, otherwise it brings about the residents' dissatisfaction (Jensen, 2008). So it can be claimed that regarding various issues bringing up in different residents lifecycles leads in changing their needs, and considering all these requirements in a flexible and adaptable designing satisfies the residents and improve the quality of housing. (Analytical diagram 4)

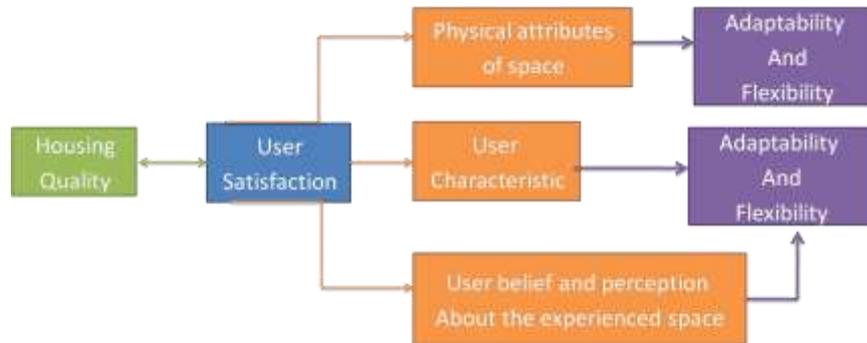


**Analytical diagram 4** : Title: Factors affecting lifecycle- Reference: Authors

E) Evaluating the relation between the residents' satisfaction and promoting the housing quality

According to mentioned points, it can be said that the residents' satisfaction and housing quality can be referred to as two concepts that are related in evaluating the housing system. In some projects, residents' satisfaction refers to a criterion to evaluate the quality of residential environment. Some others refer to it as a factor to predict the behaviors (Weidermann, 1985). Francescato (1974) and some others believe that the residents' satisfaction is the function of different variables, including residents' objective characteristics, objective characteristics of the environment and residents' perception and beliefs about their housing environment aspects, housing management and the other residents (Francescato,

1974). Objective attributes of a specific environment play an important role in satisfying people by the mentioned characteristics perception (Marans, 1981). Therefore considering these variables and designing an adaptable and flexible housing according to different situations brings about the residents' satisfaction eminently and the home stability as well. (Analytical diagram 5)



**Analytical diagram 5:** Title: Factors affecting user satisfaction and their interaction with housing quality

#### F) Evaluating different flexibility and adaptability concepts and the way they influence housing quality promotion

The concept of flexibility, which has considerably been regarded these days, is not a new concept and has seriously been applied in our traditional architectures in Iran, either in cities or villages. As an example, in traditional homes in Iran, different generations (from grandparents to grandchildren) lived together in a home, and it responded all the residents' requirements with different ages potentially and satisfied them all (Einifar, 2003). Nowadays, designing flexible homes are regarded again due to some environmental and economic problems. Furthermore, connecting the private life with professional life brings about time and space overlapping, which leads to the necessity of flexible spaces. As it was pointed out earlier, quick economic and social changes along with the technology development brought about the necessity of flexibility as a fundamental criterion in planning and designing homes for users' satisfaction in time and in different lifecycles. Potential of changeability, flexibility of different spaces, and adaptability the space to the residents' requirements and expectations according to personal tastes turn a home into an ideal one.

Flexibility is defined variously. Generally, it is defined as the changeability of things. In architecture, especially home designing, space flexibility is organizing the spaces in order to make the people able to get to different situations and conditions via certain strategies. Some spaces are suitable for many activities without any reorganization needed (adaptability) and some others are changeable for different requirements (flexibility). Organizing an adaptable space is a plan, which provide different behaviors in different times without physical changes needed. Such a space is called multifunctional as well. A space can provide many facilities in different times. In the first case, behaviors are happening at the same time. And in the second case, different behaviors are happening in one place in different times. Place of doors, windows and furniture affect the adaptability of the rooms a lot. In a flexible residential housing, according to building system, the place of internal walls is changeable at the time of necessity too meet various needs (Einifar, 2003). Some people believe that flexibility means expanding the building by adding some extra parts to it; some others know it as changing the spaces and functional parts; and another group believes that multifunctional spaces is the best solution (Habibi, 2010). A flexible home is designed in a way that its flexible components are adjustable and flexible enough to coincide it with the users' requirements; add them or eliminate them in the residential unit easily (Alalhessabi, 2006). Considering the professional adaptability and flexibility concepts, it can be claimed

that a housing that possesses these two features, has a better spatial quality and satisfies the residence better, is more stable and is suitable for more people with different features, like having physical disabilities at any age. Residence of such a place can continue their lives without any problem easily.

Having several flexible homes has brought about variety in their types, including open plan homes, homes with movable walls, flats with adaptable structure, etc. This process in Europe has led to a sort of instability. Therefore, there are new requirements for flexibility in developing homes. New methods of occupation (working at home) need a new flexible method to adapt the requirements. Combining the modules with the same value is one of the solutions in this field, which has helped to increase the flexibility. Even combining these modules horizontally and vertically is probable in future. The future of housing can be predicted as so (Sigrid Loch, 2006). Therefore proper flexibility and adaptability patterns should be applied to cover all the residents' requirements.

Comfort inside the home depends on some factors like size and quality of the main places (living room, bedroom), quantity and quality of service places (kitchen, bathroom) and flexibility and changeability of interior design of home, and total size of the house as well (Sajjadi et al., Pourdehimi et al., Zarghami, 2010). Since the quality of housing is important to people, comforting factors satisfy the residents and stabilize the home. People react toward housing on the basis of harmonizing it with their own requirements. Sometimes residents start changing the house by themselves to adapt their environment to their needs. So the architects should try to do their best to design a proper environment for them. Some of the most probable changes at home over the lifetime of the housing itself are listed below:

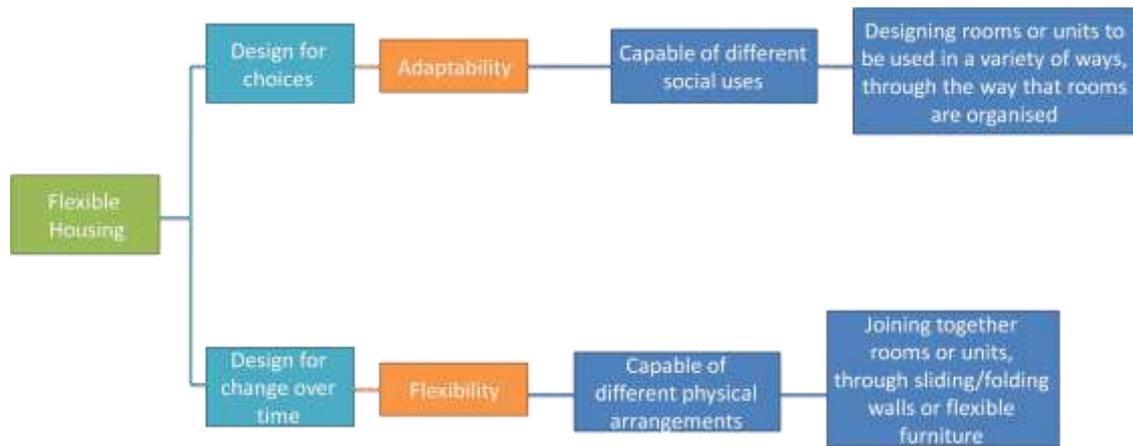
1. Daily
2. Over the users' lifetime
3. Over the building life

"It should be mentioned that if the housing cannot cope with the changing needs of the users, they will have to move on (Till et al., Schneider, 2006)." Considering all the mentioned changes, the architects should try to improve the housing quality, changeability and its multifunctioning, which result in stability of homes by proper designing and regarding flexibility and adaptability.

Shortly, it can be claimed that a flexible housing is built via two methods. First designing for sake of adapting with changes during the time. Secondly designing for sake of choices at the design stage with social and structural changes. At the first method, designing deals with physical changes of the building via joining together the rooms by folding walls or flexible furniture. At the second method, using rooms and spaces in different ways via organizing the rooms is considered by circulation pattern (adaptability) (Till et al., Schneider, 2006). Regarding these two cases in residential plans leads into increasing the residents' satisfaction and meeting a wider range of needs and stability of houses as well.

## CONCLUSION

Finally considering the literature review, it can be claimed that changing the concept of home and the form of housing system in Iran have changed the users' requirements, and ignoring these changes increases the dissatisfaction of residents and instability of houses. On the other hand, considering the residents' requirements and lifestyles either at the time of choosing a home or at different lifecycles and trying to respond them as well by flexible and adaptable housing improves the housing condition. Regarding all pointed out concepts in flexibility and adaptability, it can be said that a flexible designing is what that can be used during a long time along with probable changes in building. And using a certain place differently is what that is called adaptable designing. (Analytical diagram 6)



**Analytical diagram 6:** Title: How to achieve flexibility and adaptability in housing- Reference: Authors

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