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Examining the Role of Vitality Components of Commercial Centers in Different Ages (Case Example: Commercial Centers of Tehran)

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Research Article

Abstract

Commercial centers can be seen as the evolved form of Iran's traditional markets, which have evolved day by day with the passage of time. These places, despite the presence of diverse spaces, target specific groups, and spatial vitality is created for specific groups in the space. Persuasion in the space of commercial centers invites certain age groups to the space. This research has been done with the aim of extracting differences between the components of vitality in different ages of commercial centers. The research method is a combination of nested type and in the first qualitative stage, interviews with thinkers using the Delphi technique were used to identify the components, and from the results obtained from this stage, a questionnaire is compiled and provided to space users, for example in the quantitative stage, using Morgan's table, 384 people are selected. In the quantitative stage, SPSS and SIGMAPLOT software are used for data analysis: the results show that in the age group of 20 to 40 years, the highest factor share is related to the activity components are safety and continuity with the values of (1.000), (0.958) and (0.929). The lowest factor contribution is related to the revitalization of place and the sense of place with the value of (0.333). In the age group of 40 to 60 years, the largest factor share is related to recreation and entertainment with a value of (0.254), in the age group of 60 to 80 years, the largest factor share is related to comfort and access with values of (1.000) and access is (0.921), comfort and the lowest

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contributing factors are related to the components of revitalization of place and sense of place, recreation and entertainment (0.246).

Keywords: Different Ages; Commercial Centers of Tehran; Vitality; Combined Method

1. Introduction

Happiness and vitality are one of the most important psychological needs of greens, who become listless and tend to die due to the lack of happiness. Happiness increases awareness, creativity and activity. Facilitates social relations and preserves health and increases people's lifespan. A happy person is a healthy, cultured, extroverted, religious and optimistic person as a result of paying attention to the fact that architecture in space builds the city and people feel better from being outside the home space (Williams and Roggenbuck, 1989). Bring the two disciplines of architecture and urban planning are interwoven and both are mutually related to each other. So, if in the construction of a building, architects pay attention to the issue of shaping the public space at the same time as building design. The issue of lack of identity and the lack of public and desirable spaces for spending time in cities, which is a hot topic in contemporary architecture circles today, will be resolved to some extent. In this regard, we can mention the role of architectural buildings in the qualitative structure of urban space in Islamic architecture and urban planning (Porter, 2003). The combination of mass and space and the power of architectural buildings in the construction of urban space in traditional cities has caused the disappearance of the clear boundary line between architecture and urban space. In this way, Maari buildings contribute to the formation and maintenance of urban spaces by donating a part of their space to the urban space and paying attention to the border between themselves and the city. However, vitality has become a term that is gaining more and more fans day by day. In fact, vitality has become a versatile term that is used to justify and confirm the desirability and principle of environmental quality both inside and outside an architectural space. This research aims to investigate the effect of vitality components in Different ages are in commercial centers and it is trying to answer the question that which of the components of life change at different ages?

2. Theoretical Foundation

2.1. Environmental Vitality

Environmental vitality at the micro level gives the concept of diversity of activities in the public arena and its compatibility with the space in the military framework of behavioral camps (Golkar, 2009: 66). If we use Jan Gehl's activity classification, we can call lively environments in which voluntary and social activities flow in a relatively wide range of time (Gehl, 1996).

Environmental vitality has the ability to solve problems, as well as the ability to progress and prosper, and in fact, continuous and continuous changes (Falah Monshadi, 2013: 50). Environmental vitality refers to a system that provides for the physical, social, and mental health and personal development of all its inhabitants. It is also related to spaces that provide and reflect sensory and cultural richness. Environmental vitality is a raw energy and force that must be focused and directed towards a goal to reach it and achieve vitality. Creativity and efficiency are catalysts for environmental vitality. It is through innovation that sustainability, self-sufficiency and efficiency are created and have long-term benefits for settlements. Efficiency is considered with long-term self-sufficiency, stability, adaptability and long-term self-regeneration (Yazdi et al., 2013: 14).

In order to create environmental vitality, it is not enough to prepare rules and regulations, and we must deal with ways to create continuous and stable vitality, increasing and increasing satisfaction, as well as people's daily experience of living in an area (Stokols, 1981).

In general, there are three different types of perception of the existential state of environmental vitality, and certainly, the acceptance of each of the three points of view will have its own requirements for architects and designers.

In the first view, environmental vitality is basically an attribute and quality that exists in the essence of the physical and architectural environment and exists independently of the observer. This view is known as "environmental deterrence" and based on that; a suitable physical environment inevitably leads to environmental vitality (Golkar, 2009).

In the second point of view, environmental vitality is a subjective and taste category that is completely created by the observer and has nothing to do with the structure and characteristics of the artificial environment. This point of view is known as "Environmental Possibilism" and based on it, the geometry of the environment is considered unimportant and only the psychological characteristics and socio-economic status of the observer are considered, which classify an environment as a lively environment and another environment as a depressed environment (Golkar, 2009).

In the third perspective, environmental vitality is a perceptual-cognitive phenomenon that is formed during the trade-off process between physical and perceptible characteristics of the environment on the one hand and cultural patterns and codes, mental abilities, previous experiences and goals of the observer on the other hand. Since the 1990s, this perspective emphasizes the issue of human experiences and defines and evaluates environmental vitality in relation to human experience and perception. According to this perspective, which is known as "probabilism or interactive approach", first the environment exposes its physical characteristics and attributes to the observer's senses and then the observer makes various perceptions from that environment and finally evaluates it. and makes a judgment and attaches the attribute of vitality to the environment; Therefore, the topic of environmental vitality practically requires that the issue of quality, which is usually marginalized due to the dominance and noise of quantitative issues, becomes the main concern and the first goal of all architects and designers. Therefore, "quality-oriented decision-making" processes should be replaced by "quantitative-oriented processes" (Golkar, 2009).

2.2. Spatial Component of Environmental Vitality

Spatial dimension of environmental vitality, by considering spatial criteria in environmental design, we can expect to create a responsive and people-friendly. Functional components, on the one hand, include providing movement and easy and appropriate access to the environment, and on the other hand, include other functions such as passive entertainment, watching people and various ceremonies, eating and talking, reading newspapers, meeting friends, etc. is to guarantee the liveliness and richness of spatial experience (Golkar, 2009) according to this definition, the evaluation criteria of spatial liveliness in the environment are as follows:

1. Penetration: the more the block has access to the network, the greater the permeability (Bentley et al., 1985: 157).
2. Diversity: refers to a set of functions that a place offers.
3. Legibility of activity patterns: the ease of putting the spatial organization of any place in mind by people
4. Flexibility: places that can be used for a variety of purposes, in comparison with places that are designed for specific and limited use, offer more choice to users (Bentley et al., 1985: 157).

5. Variety: Accessible and accessible places are considered valuable when they can offer a variety of experiences, and when there is variety, it increases the audience's right to choose.

6. Hierarchy: Many aspects of the design require visual mastery. In more complex combinations, it is necessary to use hierarchies to establish the order of the parts with the whole. Functional hierarchies are found in entrances, corridors, routes and other communication networks, according to their importance. These hierarchies create a visual pattern (Simon, 2017: 202).

7. Visual fit: the extent or size that the form and capacity of the spaces are consistent with the behavioral patterns of the people and people tend to communicate or participate in the interaction, as enriching the experience of each person from the space, according to the tastes and behavioral patterns of each person. A person is formed (Lynch, 1981: 118-119).

8. Distinction/Similarity: It means distinction from others and similarity with self (Mir Moqtadai, 2018: 37).

9. Continuity/transformation: in the sense of connection with the past and non-discontinuity (continuity of meaning and self-values) in the aim of innovation and creativity according to the conditions of the time (staying the same but not staying the same).

10. Unity/plurality: It means the connection between different parts, so that together they create a whole.

11. Symbols and signs: the study of how the physical environment affects human perception and activities shows that the physical characteristics of the environment affect people's feelings and behavior by creating meanings and providing specific activities, and are effective in inducing a sense of place (Foroghi, 2011) Symbols and signs are potential means to convey meaning (Madnipour, 2000).

According to Stokols, prominent places have distinct and distinct personality, and environmental personality is made of tangible things that have materials, shape, texture, color, scale, variety, perspective and prominence (Stokols, 1981). Fritz Still considers the most important factors of environmental vitality effective in the perception and sense of place to be the size of the place, degree of enclosure, contrast, scale, proportion, human scale, texture, color and visual variety. In terms of cross environmental vitality, it includes factors such as legibility, ability to perceive the place, identity and personality (in the semantic field) and visual richness, spatial physical quality, visual gathering of people such as playgrounds, places to eat; defining entrances and access to space proportions (in the field of aesthetics) and accessibility, flexibility of the place, comfort, invitingness of the place. (In the functional area).

According to Lang, what causes the environmental vitality are:

Suitable physical opportunities to sit, pause and reflect more in the space; focal spaces for the visually and physically; Anticipating functional elements along with its aesthetic dimensions; appropriate spatial ways and communications and guiding people in the space, legibility and spatial clarity; Vehicle access control and pedestrian security; Definition of bodies and identity of walls; predicting absorbing activities; attention to the climate; Taking advantage of all senses and using natural elements.

Socio-cultural components of environmental vitality:

Residential spaces, like any phenomenon in the world, have form and content; Neither form can be imagined without content nor content without form. Content is the subject, meaning and concept that lies in a phenomenon and has a dual nature; objective and mental. The subjective and objective aspects of the content of a phenomenon are not next to each other, but are mixed together. In fact, apart from their physical existence, residential complexes also have a mental perspective that is tied to the visual quality attributed to them. Lynch (1981) believes that we should not look at spaces

only based on our imagination, but through the imagination of others (Rawdrad and Mahmoudi, 2014: 54). Therefore, the aesthetic element of a work is not only in its body and form, but also in its content. Performance is usually the benefit of a phenomenon for humans, but the meaning, the value of the concept and the message (whether intellectual or emotional) is a phenomenon (Pakzad, 2009: 96). Every space has meaning and content that includes different aspects; Meaning can make the audience understand the culture, religion, history, customs, symbols, performance, behavior, beauty, purity, etc. of a nation. These meanings can make the space memorable, alive and sensually rich.

According to this definition, the evaluation criteria of semantic vitality in the environment are the following

1. Social and cultural context: In order for an environment to be semantically appropriate, it is necessary to be in harmony with the values, beliefs and symbolic systems shared by people with which they give meaning to their environment (Rapoport, 1977).

2. Sensory richness: the variety of sensory experiences that bring pleasure to users. Elements must be visible in order to play a role in improving sensory richness (Bentley et al., 1985: 157). In the design, decisions should be made that increase the understanding and sensory experiences of the visitors and arouse their pleasure, such as a sense of belonging and a memorable experience.

3. Pleasantness: increasing the pleasantness of the space through personal experience resulting from paying attention to the details in the visual image (Bentley et al., 1985) and increasing the sense of belonging and social interactions.

4. Belonging: It comes from designs that make people feel a sense of belonging to the places where they work and live and leave a mark of themselves there (Bentley et al., 1985: 157).

5. Monitoring (participation) while using places, people should have the ability to create and manage access to spaces and activities (same). In other words, people should feel that a part of the environment belongs to them, and the environment should encourage and support the participation of citizens.

Porta and René refer to the factors of the environmental life space, socially, the process of being in the space and getting involved in its events, and they also emphasize the spatial reflection and physical manifestation of this process. What has been emphasized more than any index is the furniture and its arrangement for sitting, pausing and reflecting on the space. Furniture means comfort in pausing and reflecting on the space. The length of time that people spend in urban space is a function and indicator of the level of comfort, convenience and variety of furniture. It is also suggested that permeability exists in both physical and visual dimensions. Buildings with small size blocks that have high permeability (Porta and Renne, 2005: 53).

Porta and Rene have presented the results of their research in the field of environmental design to increase social interactions in 10 proposals:

Access routes should be designed as narrow as possible. Avoid separating buildings from the environment (especially institutional buildings); Avoiding the retreat of buildings; building small buildings instead of big buildings; Designing retail on the ground floor of buildings, if possible, avoiding placing a large number of parking lots; Porch design, back-to-back arches, short fences, curved canopies and the like and anything that gives the space a soft face are suggested. Avoid blank walls (no windows), large trash cans. Placing trees across the sidewalks. In most cases, trees are one of the best tools to transform the space into a friendly and livable environment, placing places to sit. According to Stephen Carr, public spaces should be meaningful, democratic and responsive in the sense that the design and management of the space should be in a way that meets the needs of its users. He also considers the five basic needs of people that must be answered in the

public arena: 1) comfort, 2) comfort, 3) passive participation with the environment, 4) active participation, 5) exploration.

2.3. Physical Components of Environmental Vitality

Bodily vitality means the traits and characteristics that distinguish the building body from others and reveal its similarity with the self. These attributes should be such that the body is evolving and evolving in order to preserve the continuity of time and ultimately lead to the emergence of a whole. The physical dimension of environmental vitality is conceptually synonymous with the term "personality" and "sense of place" (Mir Moqtadai, 2018: 29).

According to Kevin Lynch, if the design of the built environment is to be useful, it must be able to improve the quality of human life by improving the quality of the physical environment (Golkar, 2009: 43) and if there are no symbols or signs of the past in the environment and body of the building. If it does not have it, the vitality of the environment becomes dim (Falah Manshadi and Habibi, 2013: 51). In terms of vitality, there is an environment in spaces that have a specific and distinct personality, and the personality of an environment is made of tangible things that have materials, shape, texture, color, scale, variety, perspective and prominence.

The combination of mass and space, determining the height, the amount of retreat and the percentage of the land that is covered by the building, according to the environment and the characteristics and facilities of each space, while paying attention to the view, the continuity of the lines, the shapes and the composition of the body, the external effect, including color, texture, etc., is different (Tavasoli, 1983: 97).

The criteria for evaluating the physical dimension of vitality in the environment are:

1. Physical context: contextualism is the link between architecture and urban planning in a certain context. In fact, the most pleasant spaces have continuity and rhythm created by buildings (Yazdani and Marvotti, 2013).

2. Legibility (in physical form): Legibility is a quality that provides the basis for a place to be understood and can affect how and easily people understand the opportunities and situations that the environment offers them (Lynch, 1981: 178). According to Lynch's opinion, with the help of road, edge, node, sign and neighborhood (area) elements, readability can be created in the environment.

3. Permanence: It means that which has the power of life and life in it and will survive. In the definition of durability, the first thing that comes to mind is the concept of staying for a long time. For a scientific and physical expression of life and permanence in the plan and view and in general the body of the building, Alexander states fifteen factors, which are: different scales, strong centers, borders, alternating repetition, definite space, good shape, local symmetry, Deep coherence and ambiguity, contrast, gradation, heterogeneity, echo, empty space, simplicity and inner peace, inseparability.

4. Image: Lynch introduces the analysis of the mental image as important in the book Simai Shahr (Pakzad, 2009: 108).

Morphology is the factor that distinguishes one space from another, and this factor shows the individuality and physical identity of the space; Therefore, the facade of a residential complex is one of the most prominent features of the city, which is always visible to the observer and evokes memories, and these memories evoke a sense of belonging to the place and ultimately creating environmental vitality for the residents.

2.4. Functional Components of Environmental Vitality

One of the very important features of environmental vitality in public spaces is the variety of different functions together. It is obvious that it is very necessary to pay attention to the facilities and limitations of the space as well as their different location and appropriateness of the activities, and in line with this necessity and creating factors of dynamism and mobility in public spaces, pay attention to those spaces that cause this dynamism, becomes important.

Economic development and attracting economic capital are the necessary condition for increasing the vitality of the environment, the prosperity of existing small businesses, and the active presence of citizens in public spaces. This presence of citizens is realized by creating an opportunity to sell goods and economic exchanges, which leads to the development of the local economy, that is, small businesses.

This dimension refers to the fulfillment of individual needs and goals (Williams and Roggenbuck, 1989; Stokols, 1981) based on the quality of the place in responding to the needs of users compared to other similar places, depending on the person's previous experiences, how to access the place and activity patterns in it (Williams and Vaske, 2003: 838). Also, with the help of space design, to a certain extent, the number of people who use the public space, the duration of the activities and the type of space activities can be affected. institution Yan Gol states that he divides all the activities that take place in the public space into three categories. Essential, optional and social activities. The first two activities are the background for the occurrence of social activities. All types of activities include basic activities. These activities include walking, sitting, standing, seeing and watching, listening and speaking. These activities almost cover a part of all other activities. To carry out any of the basic activities, public arenas must have three basic qualities. Protection, comfort and enjoyment of the environment.

According to Williams, people with similar characteristics such as economic class, lifestyle, financial income and education play a significant role in the temporal continuity of a person's presence in a place. Efficiency is another factor in environmental vitality. Referring to the economic model of land and its costs to consider this problem in cities, which includes a kind of profit-cost function in the category of location of uses.

2.5. Communication Components of Environmental Vitality

The communication network has a life-giving effect on the body of the settlements, but it is visible. The communication network from two main aspects (as a pillar of the transportation system and as a space for communication and face-to-face encounters), not only has not found any importance, but at the present time it has such a small place that even in its most normal state as a system There is no contribution from urban transportation either (Rafiyan et al., 2013: 42). Today, in settlements and residential complexes, due to major problems in communication routes, such as the lack of proper design of sidewalks, lack of adequate protection of pedestrians against atmospheric factors, the presence of air pollution and noise pollution, etc. The environmental vitality of the settlements is decreasing day by day (Ahmadi, 2014), in order to increase the environmental vitality in these places, designers should take into consideration the following criteria:

1. Access: the ability to access activities, resources, services, information of different places or persons, including the quantity and variety of accessible elements (Lynch, 1981: 118-119).

2. Speed and movement: in designing the space, the proportions of the edges, rhythmic or linear features of the space should be adjusted in such a way that it affects the speed of movement and the

perception of the space so that with the movement of the observer in the environment and landscape, his experience to reach the maximum from space.

3. Communication: Pedestrian networks that play a key role in proper access to the destination.

4. Flexibility: if it has a suitable width, a smooth surface, and a suitable landscape in the residential complex, it can create an environment in accordance with human needs.

5. Convenience: it causes safety and non-delay for pedestrians.

6. Being happy: it makes residents interested by cleaning and removing threatening factors.

7. Clarity and transparency: the access routes are strange and at the same time have a coherent network.

Pakzad considers the goals of the communication network program to be north of vitality (variety along the route and permeability), pedestrian safety, flexibility in use and performance (Pakzad, 2009: 28-36). The static and dynamism of the space is also effective in improving the communication spaces; By maintaining the standards for planning communication networks, it is possible to create suitable nodes for pausing, sitting and watching. Frank Jaskevich has identified the important points in evaluating the quality of the access network derived from the aesthetics, comfort and relaxation of movement and activity in the space and has proposed nine principles: understanding the place with the degree of enclosure, the complexity of the transit network, the blending of buildings with the space. , the complexity of the spaces, the diversity of the roof line or additional components of the body and covering the passage, the protective space or demarcation, the shade of trees, the transparency of public and private spaces, physical characteristics (Bianchini and Landry, 1994: 1-14).

2.6. Climatic Components of Environmental Vitality

The quality of the environment is known to be synonymous with basic human needs (Carr et al., 1992: 103). There is a close relationship between vitality and environment (Diener et al., 1997: 189). People's lives are completely influenced by their physical environment. Pollutants and dangerous substances have a considerable effect on people's health. Also, environmental quality places great value on the beauty and health of the place where people live (Heink and Kowarik, 2010: 591). The characteristics of the environment are very effective in people's skills, attachment type and tendencies. The higher the quality of the environment, the better it can convey the feeling of well-being, happiness, well-being and satisfaction to the residents through features that may be physical, social and symbolic (Kearney, 2006: 113).

According to Pourmohammadi, desirability is a criterion in which the preservation of natural factors, landscapes and pristine spaces is emphasized, which also increases the importance of urban green spaces. The climatic dimension of environmental vitality, in addition to having recreational, cultural and environmental aspects, also has the aspect of providing services to different areas of the city (Ghorbani and Timuri, 2018: 48). For example, the establishment of green spaces, on the one hand, due to the impact they have on the environmental vitality, and on the other hand, due to the financial burden they place without return of investment and profit, are worth extensive investigation (Kabisch and Haase, 2014: 129).

Natural elements represent the natural vitality of any place, and since nature is a part of human existence from the beginning and a person can relax next to it, its spaces and elements should provide such an environment and bed and be a place of human relaxation. This peace generally has an emotional and psychological aspect in addition to the physical aspect, so that natural elements are familiar signs for people; These signs communicate with the citizens and become a part of their existence and memory (Khatibi, 2012: 65). In order for the environment to be functionally

appropriate, it is necessary to have a climate that has its effect on materials, colors and openings, compactness. Size, form, etc. appear, to match (Yazdani and Marvotti, 2013: 12).

Paying attention to climatic and environmental characteristics and the effect these characteristics have on environmental vitality is very important in terms of raising the quality level of comfort and health in open and public spaces and also in terms of reducing the amount of pollution. Climatic factors, including wind, humidity, temperature and radiation, affect the space in different ways, and depending on the intensity and weakness of each one, the environmental comfort is increased or disturbed. Providing rules for the design of man-made environments makes it possible to use climate factors that are suitable for human comfort (Diant et al., 2015: 6).

According to Aminzadeh, in examining the environmental component of environmental vitality, the balanced organization of the environment (flooring, furniture, lighting, paint, decorations and avoiding unnecessary additions), bioclimatic effects such as changes in the pattern of wind behavior and shading, pollution (noise pollution), air pollution, pollution caused by improper disposal of waste and sewage) should be considered.

Environmental comfort, elimination of environmental and noise pollution, speed and continuity in environmental protection and cleanliness provide environmental vitality (Salehi, 2017: 127). Environmental comfort is caused by environmental comfort, optimal fit with the climate and utilization of natural elements, providing the necessary humidity in public spaces through the presence of water and plants.

Table 1 Classification of vitality indicators in different dimensions (source: authors)

Physical	Texture (materials, facade, structure quality of buildings, complexity and variety of buildings, readability of form, attractiveness and beauty of form, lack of physical deterioration of mass, definition of bodies and identity of walls) Form (the area of the residential complex, the area of the open space of the residential unit, the geometry of the place, the number of floors of the residential complex, the distinction in the elements and the physical structure of the residential complex, the absence of extreme level differences in the spaces, the physical node of the place)
Spatial	Spatial openness (preservation of open spaces, freedom of choice, diversity, openness, transparency of borders, contrasting spaces, pause spaces, degree of confinement, surprise and discovery) Spatial continuity (transparency and fluidity of surfaces, axis adaptation of spaces, repetition and rhythm, unity) Spatial proportions (scale, weight, rhythm, composition, arrangement of shapes, order and skyline...) Revival of place and sense of place (diversity of sensory stimuli, creation of public and private arenas, creation of mixed spaces, sense of individuality and belonging, sense of individuality and natural resistance, sense of trust and confidence, sense of solidarity, conformity with mental images, identity and personality Specificity of the place, ability to create memories of the place, sensitivity to changes in the space) Coherence of situations (location and dimensions of green space, location and dimensions of playground, location and dimensions of sitting places, provision of non-fixed benches for sitting and increasing opportunities for selection, location and dimensions of green paths) Safety (safety in the playground, safety against cars, compliance with spatial hierarchy) Spatial diversity (legibility (activities, physical), signs, flexibility, adaptability) Aesthetics (combination of line elements, landscape, shadow and light and color, visual richness) Popularity (avoiding extensive landscaping and decorating the space, integrating

	public functions in the design) order and diversity (creating a delicate balance and appropriate combination in design, creativity)
Functional	economic (job and income of people) activity (type of activities: necessary, optional, social), multi-functionality of space, functional and activity distinction Services (shopping center, shops and variety of business units and non-commercial uses, recreational and sports services) Type of ownership (personal, rental, mortgage)
Sociocultural	Social activities (social interactions and communication with others, cooperation and participation, a sense of belonging to the community, the activity of free associations, cultural celebrations, social activities, the right to enjoy public spaces, holding ceremonies and celebrations, the opportunity to socialize for children and teenagers in open spaces, appropriateness of the place with the cultural-social characteristics of people, maintaining moral and religious proportions of people, diversity of ethnicities) Personal activities (strengthening personal communication (visual, verbal and visual communication), the right to enjoy private spaces, presence and daily activities in a place, presence and special activities in a specific place Security (monitoring by the residents of the residential complex, presence of women and children in the area, night activities, monitoring on the footpaths)
Connection	Access (access network to open and outside spaces, pedestrian access network, bicycle paths, children's play area, ease of pedestrian movement, permeability) Facilities and equipment (parking, speed limiter)
Environmental – climatic	The interaction of architecture and design of open space and nature, recreation and entertainment Harmonious organization of the environment (flooring, furniture, lighting, decorations and avoiding unnecessary additions) The degree of adaptation to nature (coordination with vegetation and local climate) Comfort (cleanliness and hygiene, welfare facilities, non-pollution, comfort of people in the environment in different climatic conditions) Natural landscape (green space and vegetation, water feature, distinction in the natural elements of the open space of the residential complex)

3. Commercial Center

With the concentration of commercial spaces in the walls of the street and the traffic of cars, the necessary security and comfort have been taken away from the users and the possibility of freedom of movement and rest has been taken away from them. On the other hand, the non-compliance of these spaces with the needs of society increased the desire of users towards social and recreational activities in commercial centers. The use of the model of markets and urban spaces of traditional Iranian architecture, where social and cultural relations were widely accepted, has caused today's shopping centers to be designed as urban complexes, which, while meeting the needs of commercial spaces, provide urban space and create a suitable bed for social and recreational activities.

4. Shopping Center

A shopping center can be a row of stores in vacant lots adjacent to existing streets or low-traffic sidewalks that are open and uncovered or enclosed to control environmental conditions. It can also be a building with collections of buildings with various stores that are connected by central corridors. This type of shopping center facilitates people's shopping flow and increases their power of choice. Each shopping center can include the following different sections:

• Stores: In stores, which are the main part of shopping centers, a wide range of goods and services needed by buyers are offered.

• Supermarket: It is a store usually with an area between 400 and 2500 square meters, where two-thirds of its main products are food, and home appliances and clothes are sold as secondary products (Iran Doost, 2013: 2019).

• Hypermarket: It is a store with an area of more than 2,500 square meters, one third of which is dedicated to food and includes a wide range of other types of goods such as clothes and home appliances, which are offered at a relatively reasonable price.

• Recreational-cultural sections: creating recreational facilities in large shopping centers to attract customers is one of the most important developments in design in recent decades, the integration of recreational-cultural sections with green space has turned shopping into a fun activity for all family members (Porter, 2003: 382).

• Chain store: Chain stores supply goods and services at the level of the city, the country and the world, with the use of a single and central management, with suitable facilities and equipment.

• Specialized multi-purpose stores: include supermarkets and large pharmacies that include a set of related goods.

• Single-purpose specialized stores: they offer only one group of specific goods. Such stores are just services or are created by product manufacturers (Raskin et al., 1994: 89).

• Convenience stores: these stores provide the most important daily household items easily - the network of said stores are created and distributed through consumer cooperatives and trade unions.

• Property: The modern and different form of traditional open-air markets is the markets formed inside large buildings whose roofs make it possible to establish them in any weather.

• Virtual stores and remote sales: Many shopping centers create a virtual store on TV and the Internet, providing customers with the opportunity to view and choose products and deliver the desired products to their homes.

5. Research Method

The current research method is fundamental-applied, and in terms of the type of method, it has the nest-to-nest combination method. To answer the research questions, the nest-to-nest research method is used in a qualitative and quantitative manner. In the qualitative method, the foundation data method is used for coding, and for the quantitative method, the causal-comparative method is used, which is firstly done by extracting concepts from the coding of semi-structured interviews with thinkers. Then, the extracted categories and codes are used in the compilation of the questionnaire. The interview questions were based on the concepts extracted from the vitality in architecture and urban planning, and for the correctness of the questions, experts are evaluated and scored using the Delphi method. The validity of the questionnaire is using the CVI formula. = 0.73 and reliability using Cronbach's alpha = 0.72. For convenience, the pre-designed coding table is used. Interview analysis is done using Atlas T software and using open and axial coding.

Open Coding

The open coding process is an analysis through which concepts are identified and features and dimensions are discovered in the data (Lee et al., 2011: 49). At this stage, the foundational data theory forms the primary categories of information about the phenomenon under study by segmenting the information. The researcher bases the categories on the collected data such as interviews, observations, and notes (Creswell, 2003: 397).

Axial Coding

The process of relating categories to sub-categories and linking categories at the level of characteristics and dimensions is this coding called axial, coding is based on the axis of a research category. Strauss has discussed several main actions in the stage of axial coding (Lee et al., 2011: 50).

Table 2 Axial coding (Lee et al., 2011: 49)

1	Articulating the characteristics of a category and its dimensions is a process that begins during open coding
2	Identifying various conditions, various actions or interactions, and various consequences related to a phenomenon
3	Relating a category to its subcategories through propositions that suggest how they relate to each other.
4	Searching for clues in the data that indicate how the main categories may be related.

5.1. Sampling

This section includes two different samplings as quantitative and qualitative.

Qualitative sampling

First, 20 experts who are experts in the subject and the faculties in the universities of Tehran and were selected as a snowball, were asked to report to the business centers that were eligible to be investigated in the field of vitality, the level of utilization and having different factors of vitality in the spatial dimension was given a score of 1 to 10, and commercial centers whose average score was above 5 were selected and again referred to experts to confirm their selection. In the next step to interview the experts, 41 people were interviewed in this study, which was repeated in the received information from the 37th interview onwards. According to the principles of grounded theory, after the first interview, data collection and analysis are done.

Table 3 Characteristics of the interviewed people

Interviewees	**Number**	**Abundance**	**C**umulative percentage
Professors of architecture	19	46.34	46.34
Professors of landscape architecture	15	36.52	82.86
Urban design professors	7	17.14	100
Total	41	100	100

Quantitative sampling

In the next step, according to the opinion of the experts and specialists of the extracted variables, a questionnaire was compiled in the form of a closed questionnaire with five-point Likert answers. The structure of the questionnaire includes questions related to the main question of the research; That is, to investigate the effect of each of the existing spatial factors on the vitality of selected commercial centers in the city of Tehran and in line with responding to it. In order to perform the calculations, a score of 5 for "very high impact" and a score of 1 for "very low impact" was considered by each expert, and in order to minimize the cost and time, the questionnaire among a

random sample of the statistical population (space users) was distributed. The sample size was selected using Morgan's table, which includes 384 people, who were randomly distributed in commercial centers according to the population and the separation of men and women.

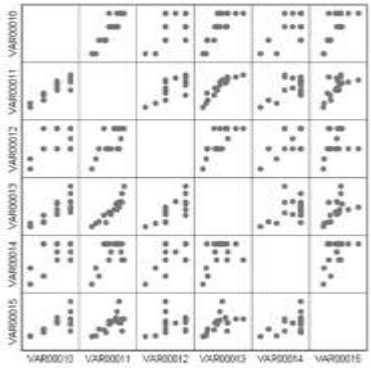

Fig 1 Correlation matrix of factors

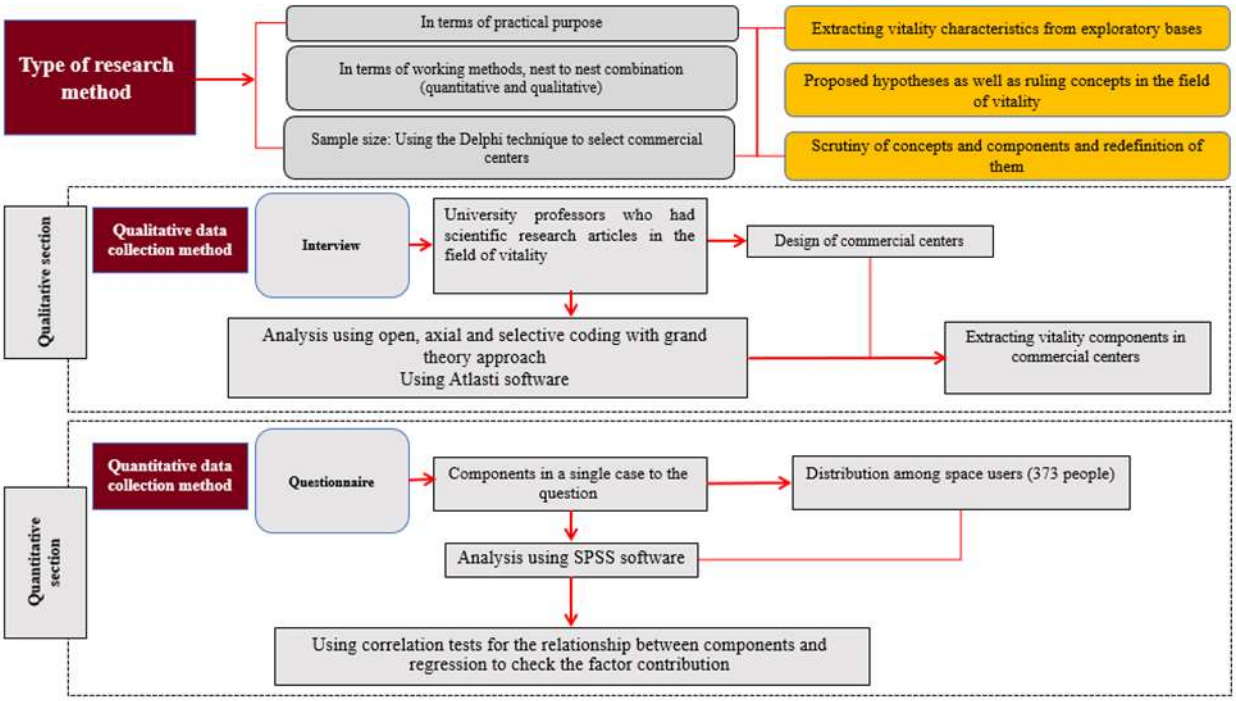

Fig 2 Steps of research implementation

6. Study Area

In this research, in order to select the study area and measure it, the experts were asked to give a score from 1-10 in order to select purposeful and valuable samples in environmental vitality for different age groups, and those whose average score was above 5 were selected. This is described in the following Table 4.

Table 4 Commercial center chosen by intellectuals

Tuba commercial center  www.delgarm.com	Rosha commercial center  www.funzi.com	Donya Noor commercial center  www.touristgah.com	Palladium commercial center  www.eneshat.com
Milad Noor commercial center  www.safarzon.com	Bam Land commercial center  www.karnaval.ir	Sana commercial center  www.smarttiz.com	Vanak commercial center  www.adnel.com
Commercial centers of Iran Zameen  www. safarzon.com	Iranian commercial center  www.iraniansc.ir	Tandis commercial center  www.epersianhotel.com	Iran Mall commercial center  www.funzi.com

7. Results

In the Delphi phase, the implementation phases take place as follows;

- First phase of brainstorming;

The first questionnaire was sent to the Delphi committee via e-mail and they were asked to name the various vitality factors and their dimensions in connection with the first part of the question. In the diagram below, the factors related to vitality in the first period are shown by scholars, which reaches a total of 20 items.

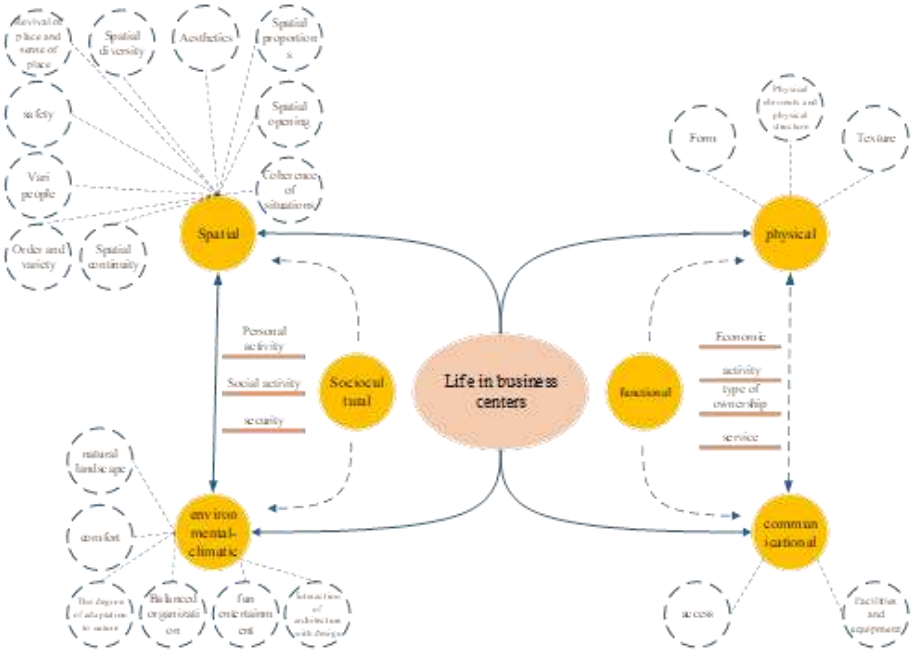

Fig 3 Variables extracted from the first round of the limiting phase in Delphi

- Second phase of limitation;

In the next stage, the experts were dealt with as a separate panel and they were asked to rank the factors selected by each panel. Each expert was asked to choose the number of 10 factors for each panel.

- Third phase ranking;

Experts are asked to rank the agents in their edit hit lists; Average rank is calculated for each item. In each list, evaluation is done using W. Kendall and this continues until they reach a consensus and some of the variables of the first round are removed. In the following graph, the Kendall coefficient is calculated for each variable, as well as the excluded variables are displayed.

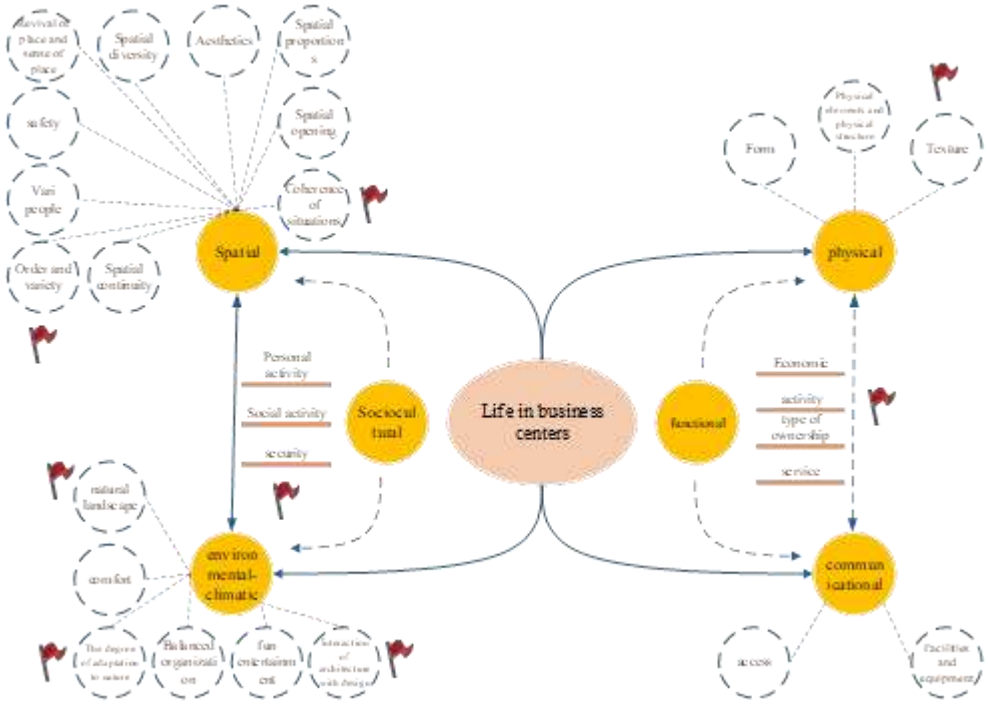

Fig 4 Selected components from the selection phase in Delphi future research

7.1. Quantitative Findings

After extracting the questionnaires, the following diagram is drawn, which revealed that in the age group of 60-80 years, the most influential component includes service and access, and the least frequency related is entertainment and personal activity. In the age group of 60-40 years, the highest frequency is related to spatial diversity, services, and the lowest frequency is related to safety. In the age group of 40-20 years, the highest frequency is related to facilities and equipment and spatial diversity, and the lowest frequency is related to the revival of place and sense of place.

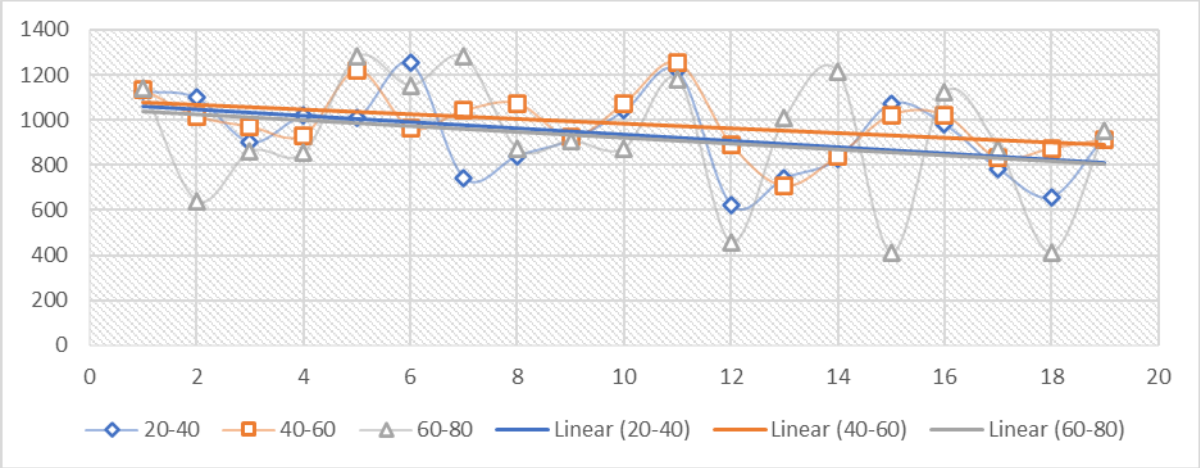

Fig 5 Frequency of various life variables in different age groups

In the age group of 20 to 40 years, the highest factor contribution is related to activity, safety and continuity components with the values of (1.000), (0.958) and (0.929) and the lowest factor contribution is related to revitalization of place and sense of place. with a value of (0.333). In the age group of 40 to 60 years, the largest factor share is related to recreation and entertainment with a value of (0.254), in the age group of 60 to 80 years, the largest factor share is related to comfort and access with values of (1.000) and access is (0.921), comfort and the lowest contributing factors are related to the components of revitalization of place and sense of place, recreation and entertainment (0.246).

Table 5 Step-by-step regression of different age groups for vitality components

60-80			40-60			20-40			Scale	Dimensions
β	F	coefficient of determination	β	F	coefficient of determination	β	F	coefficient of determination		
0.741	342/411	0.710	0.781	222/527	0.752	0.762	217/314	0.867	Body elements and body structure	physical
0.429	446/444	0.840	0.732	122/405	0.920	0.372	147/523	0.895	Form	
0.623	752/985	0.714	0.662	343/217	0.803	0.872	381/852	0.813	Economic	operational
0.685	223/211	0.883	0.648	943/199	0.746	0.685	921/298	1/000	an activity	
0.621	773/225	0.619	0.664	612/201	0.681	0.597	257/247	0.612	service	
0.652	681/653	0.836	0.662	623/643	0.816	0.436	321/644	0.656	Facilities and equipment	communicational
0.612	654/724	0.920	0.652	683/849	0.723	0.852	523/845	0.645	access	
0.381	621/741	0.654	0.665	603/349	0.846	0.665	254/754	0.645	Spatial opening	Spatial
0.484	325/512	0.625	0.483	945/184	0.814	0.213	541/124	0.715	Spatial proportions	
0.464	748/276	0.546	0.464	748/276	0.546	0.425	241/232	0.514	Aesthetics	
0.421	125/302	0.881	0.452	943/199	0.795	0.414	321/201	0.795	Spatial diversity	
0.631	034/519	0.265	0.463	034/499	0.243	0.421	124/443	0.323	Revival of place and sense of place	
0.124	125/521	0.745	0.472	034/523	0.895	0.421	134/522	0.958	safety	
0.311	258/149	0.540	0.661	258/147	0.978	0.615	265/229	0.921	Continuity	
0.325	214/315	0.368	0.452	564/321	0.462	0.424	412/323	0.906	Personal activity	Social and cultural
0.425	371/458	0.275	0.401	371/492	1/000	0.423	211/441	0.846	Social activity	
0.223	695/325	1/000	0.411	658/471	0.745	0.454	541/321	0.821	comfort	Environmental - climatic
0.529	937/621	0.244	0.421	987/650	0.254	0.341	991/621	0.485	entertainment	
0.679	210/521	0.452	0.589	960/542	0.455	0.578	920/581	0.675	Balanced organization	
0.628	312/520	0.654	0.521	362/214	0.781	0.514	654/218	0.754	Body elements and body structure	

After determining the coefficient of determination of the obtained components in each age group, the fit diagram is drawn between different groups 20-40, 40-60, 20-40, 60-80, 60-80 and 60-40. The responses obtained from the age groups of 20-40 years and 40-60 years have a high correlation and can be used to examine different samples from the same age group. But both of those age groups have a small correlation to the answers given by the age group of 60-80 years.

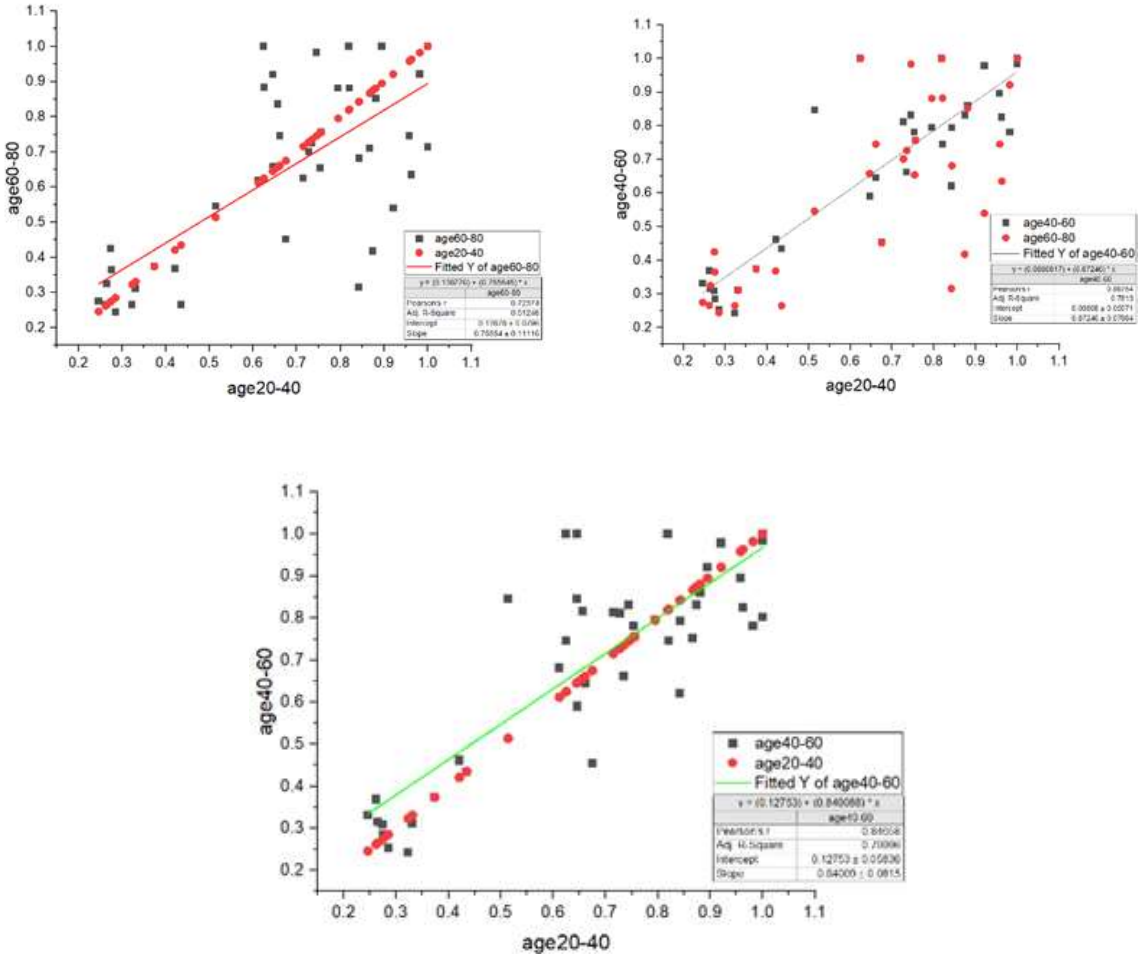

Fig 6 Fit between vitality components in different age groups

This research is theoretical-developmental in terms of type, and in terms of the nesting method, it was qualitative and quantitative. The nested research design is a design of mixed methods in which a data set provides a supporting and secondary role based on the primary data of another type (Clarck, 2008: 210). Existing documents of ruling discourses and its components are extracted. Then, semi-structured interviews are used for the type of influence and areas of influence as well as indicators of collective housing. At this stage, the questions are extracted from theoretical bases and the interviewees are university professors who are proficient in this subject and have at least two scientific research articles and are selected as a snowball. Then, in the interview results, interpretive, descriptive and live coding are used for analysis and labeling as well as data reduction. The results are displayed with the help of waterfall charts. And for this, ATLASTI software is used. In this step, looking from the outside (etic) is the answer.

In the next step, after extracting and categorizing the indicators, a questionnaire with a Likert scale is compiled and provided to the space users. Their number is selected based on the upper limit of Morgan's table, which is 384 people. And the results are extracted in the form of factor analysis with NCSS software, the sampling was random and experts were used for validity in the qualitative

stage and the CVR formula was used in the quantitative stage, and its value was 0.75. And reliability was obtained with Cronbach's alpha. It was found that its value was 0.72. The diagram of the research process is as follows;

8. Conclusion

Environmental vitality is a communication that occurs with a person's presence in the surrounding environment and creates ideas in his mind that are a level of his relationship with his surrounding environment. This relationship becomes deeper with the passage of time in the environment due to repetition in different seasons and the passage of life in space. But the physical characteristics of people have changed over time after the passage of several years, and there have been signs of indifference and undervaluing of these variables in different age groups. And the factors in it change. The surrounding environment of people of different ages can have different effects on different people and cause changes in the type of their moral characteristics, and the interpretations of environmental markers for them have been different in age groups. In this research, it was shown that the factors of environmental vitality at different ages have three different states or in general these factors do not change, and with increasing age there is no change in the type of perception and its effect on vitality by people, such as aesthetics. , or over time it has lost its value in the environment and its effects on vitality have decreased, such as activity, or the contribution of the component increases, such as the comfort component, in general, it is suggested that in the design of business centers to respond to the environment for All age groups must comply with the following.

- Conducting pre-design studies in all age groups in commercial centers based on the types of open spaces
- Research studies on age-related disabilities in the elderly, which lead to a lack of accurate perception of the environment.
- Measuring the effectiveness of various environmental factors in inducing environmental vitality based on age groups with a 5-year distribution
- Examining the effects of gender in the perception of the environment and the factors affecting it
- Providing comfort facilities for the old age groups so that they don't have any problems to spend a long time in the environment
- Designing environmental components in such a way as to induce a sense of movement and vitality in young people and to create a sense of stillness in old age in a way that strengthens people's connection with the environment.

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