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# AN INVESTIGATION TO THE COMPARATIVE IMPACT ASSESSMENT OF URBAN FACADES ON PSYCHOLOGICAL ATTRIBUTES OF RESIDENTS IN NEW AND OLD HOUSING AREAS; THE CASE OF JOLFA STREET IN ISFAHAN

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#### Abstract

Visual pollution in the urban facade is one of the causes of distress and anxiety in today's cities. The purpose of this research is to achieve disruption and tranquility causing factors in new and old facades in Jolfa district of Isfahan and finally preparing design tips of a safe, relaxing and without visual pollution facade. Therefore, archival and field work documentation has been analyzed and according to the statistical with SPSS 20 software investigated correlation between variables. The results show that almost certainly there is a direct and significant relationship between the urban facade and citizens spirit; Questionnaire results suggest dissatisfaction of citizens and the existence of negative effects such as stress, lack of vitality and sadness toward a part of the contemporary constructions and in front of it the sense of happiness, calmness and liveliness toward the historical body or harmony with it. The physical reasons for dissatisfactions are often lack of coordination between adjacent facades.

#### Streszczenie

Wizualne skażenie miejskiej fasady jest jedną z przyczyn zmartwienia i troski w dzisiejszych miastach. Celem badań jest zdiagnozowanie czynników powodujących zakłócenia oraz przyczyniających się do uspokojenia w odniesieniu do nowych i starych fasad w Jolfa w Isfahanie oraz przygotowanie wskazówek do projektowania bezpiecznej, relaksującej i pozbawionej bałaganu elewacji. Przeanalizowano zatem dokumentację archiwalną i terenową oraz zbadano korelację między zmiennymi według danych statystycznych z oprogramowania SPSS 20. Wyniki kwestionariusza sugerują niezadowolenie obywateli i istnienie negatywnych skutków, takich jak stres, brak witalności i smutek, odczuwanych wobec części współczesnych konstrukcji i przeciwnie – poczucie szczęścia, spokoju i życzliwości względem historycznej powłoki. Powodem niezadowolenia jest często brak zgodności między sąsiednimi elewacjami.

Keywords: Environmental psychology; Mental-Psychological characteristics; Old and new views in neighborhoods; Urban views.

#### 1. INTRODUCTION

Urban landscape is visual and structural integration of buildings, streets and places sets that make the city environment [1]. The urban landscape provides the possibility of urban pathology in addition to making possible the "reading" of the urban fabric. In fact the urban landscape is a set of environmental stimuli; these stimuli contain information that can allow space perception, this perception affects the psyche of the citizens consciously or unconsciously [2]. Promoting physical and visual quality in public arena is in a high position in order to enrich the experience of the presence and improve the psychological conditions of citizens in the public arena. Based on the fundamental belief of this paper, there is a mutual relationship between human behavior and characteristics of the environment and space. Buildings architecture and landscape architecture are of those factors in human life that have a considerable impact on psyche and social mores and even the individual human personality [3]. Cities landscape and visual environment manifests themselves through a complex system of signs, socio-economic and cultural characteristics of communities. In the process of interaction between man and the city, the visual environment as the intersection of these two, provides aspects of perception, cognition and environmental assessment of citizens and visitors. The cities with desirable visual environments can promote society mental image of them, strengthen their civic pride and attract capital and creative people more and more [4]. In fact, if the visual aspects of the city be strengthened, its impact and meaning will be added [5]. It seems that man is the missing link in his complex relationship with the environment and the residents of the city, in these modern societies; where, according to most psychologists, directors and writers, the mankind is locked in his made cages day today and experienced many challenges during the day. Many of these challenges arising from the urban space which makes its appearance in the form of aggression, depression and apathy within the community and these people want psychoanalysis within themselves to find the root of mentioned traits themselves by visiting a psychologist, not knowing that many of these perversities have penetrated to them from the environment. While the city must protect the citizens interests and be the guarantor of their happiness [6]. So in designing and the process of improving the quality of the environment, promoting the visual quality of public areas, to enhance the quality of people presence is in a high position.

The first manifestation of the city in the minds of citizens, are facades accordingly, it is important that

cities facades are considered from the perspective of visual pollution. This has a double importance in Iran especially due to intense urbanization experienced in recent decades [4]. An Overview to perspective of old textures indicates a kind of balance and a sense of calm in facades and consequently induction of these sense on citizens and residents; that is mainly arising from the kind of the confrontational approach with perspective and cultural deemed of its inhabitants. Implementing some interventions in the process of designing the urban built environments seem necessary by psychological study of these spaces to lead to create of an environment responsive to the needs of citizens and at the same time appropriate to urban performance and behavior needs [7]. The purpose of this research is to achieve disruption and tranquility causing factors in new facades and preparing design tips of a safe, relaxing and without visual pollution facade. This paper seeks to answer the following

- 1. What impact new facades in Jolfa district of Isfahan do have on the psyche of the citizens compared to old facades?
- 2. What changes in the facade of a city can improve the mental and psychological state of its citizens?

## 2. METHODOLOGY

This study is qualitative-quantitative, and in terms of the application orientation and according to the method and purpose it is a correlation and survey one. Data was obtained using library resources and field observations, the first part of research (theoretical foundations) is qualitative and the second part (statistical analysis of questionnaire) is quantitative. In this paper, three neighborhoods of Isfahan Jolfa have been selected to evaluate the effect of facades on the psyche of the citizens. A part of studied area is the part of historical context and the other part is related to new context. At first indicators are extracted to measure using content analysis of theoretical texts, then façades and facades of the studied area, categorized and some examples of each category that were morphologically different from each other, selected. Finally, samples were measured and analyzed using a questionnaire. In compiling the main part of the questionnaire, fuzzy logic or semantic differential technique has been used, that its application can be changed depending on the object and purpose of measurement. This method is made based on the associations, during which a stimulus is presented to the participants. Participants must examine stimuli on the basic of bipolar characteristics and determine

what relationship can be established between stimulus and contrasting characteristics. In this paper we have tried to use a valid dictionary for the opposite poles of each word. It should be noted that some of the items that previous researchers had questioned semantically were dumb or created different concepts in mind of the audience that this shows a lack of validity in their tools. Therefore, in this paper we have tried to remove these items or this ambiguity is resolved as much as possible by providing more appropriate synonyms and antonyms for each word. The reliability of this questionnaire has been evaluated through referring for several times and obtaining almost the same results. Also it has been tried to distribute questionnaires among different classes almost proportional for the reliability of questionnaires.

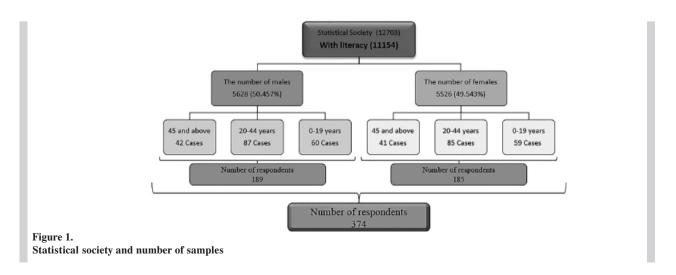
Since the perception of environment is a process based on sensory information and expectations are based on experience and depend on culture, attitude and values governing the thoughts of perceiver [8] of the same questions in different regions and cultures can have different results. So respondents in this study were selected randomly and objectively from indigenous people of the studied region. We tried to give questionnaire to the full spectrum of age, gender and education. After collecting the questionnaires, the statistical analysis was carried on and then obtained data were analyzed with a deductive and exploration approach, and ultimately a few suggestions were offered.

In this study, stratified sampling was used to make sure that selection was based on chance and there is equal chance for each subject of the sample being selected. In fact, the population of the studied area was around 12703 individuals from which 87.8 percent was literate. First, subjects were divided based on being literate or

illiterate and the illiterates were left out from the study due to the lack of ability to answer the questionnaires. Morgan chart was used in order to determine the sample volume. Thus, based on the statistical society the number of the subjects was determined to be 374 individuals. Then the subjects were categorized based on features namely gender and age. Then, according to the percentage of each category, the questionnaires were distributed. In fact, attempt was made that responders cover a full range of gender, age and education according to proportions.

For the questionnaires, the authors went to the area and asked the local people there individually to answer the questions. With this process any ambiguity arising for the subject was taken care of by the authors; thus the error due to words with several different meanings was reduced. The diagrams were printed in color with the size of 8\*16 with high quality. Furthermore, since the subjects were locals of the area, they generally knew the questioned diagrams and views. Emotional connections to the location may affect answers as an intervening factor, but attempt was made to reduce the effect of this factor by increasing the number of questionnaires. In addition, in the beginning stages, in order to check the questionnaires, 20 questionnaires were sent by e-mail to friends and relatives who were not locals of the area but still knew it to some extent. The results of these 20 questionnaires were not very different from the main questionnaires answered by the locals of the area. This can show that being emotionally connected with the location or living in these buildings were not that influential on the results of this study.

All the presented results namely the causes of anxiety were taken from analyzing and comparing the received responses from the questionnaires (Fig. 1).



### 3. THEORETICAL FRAMEWORK

In the following, after the literature review and determining the desired characteristics of the former investigators in connection with the municipal body, definitions related to the topics are discussed.

# 3.1. Research Background

In recent years the relationship between humans and the environment, and its translation into the language of design and architecture, has been of interest to researchers in this field. Environmental Psychology was introduced from the late 60<sup>th</sup> century by people like Harold Proshansky, William H Ittelson and Leanne Rivlin [8, 9]. After that, some researchers began to study the interaction of humans and the environment [10, 11]. Russell and Snodgrass (1987), have suggested that emotional and affective quality of the environment which is the main factor in determining the moods and memories associated with a position, can impact individuals' health [12]. Evans also has examined the direct and indirect impact of factors related to the built environment on mental health [13]. In his opinion, those features of built environment, which directly impact on mental health include: Congestion, noise pollution, air quality and lighting, in addition, changes in psycho-social process, which have known psychological effects, also can indirectly affect human psychological health [14]. Meanwhile some scholars have issued the concept of place attachment [15].

The studies by Wejchert were focused on the urban landscape, and his method, called the method of the "curve of impressions", consisted in the presentation of the scale of tension and emotional impressions that appear in the observer when travelling through a given time–space sequence [16].

Some researchers have evaluated the effect of urban visual of urban space on the behavior of citizens and provided some suggestions in order to improve the behavioral patterns [17]. Urban facade and landscape are contact level of human and the city phenomenon, therefore a significant portion of citizens' environmental knowledge and emotions are formed influenced by it. Landscape is a means which emerges the city [18] and from Kuhn's view the kind of buildings design has the potential to create stress and thereby affect on mental health [19]. Despite the importance of effect of the city facades on the environment beauty and psychology, less research is directly related to these facts. Some researchers have considered the urban facades as a phenomenon influenced by envi-

ronmental factors [20]. According to some researchers, reduction of facade turmoil the existence of beautiful and fascinating sceneries can reduce the role of some visual disturbances and lead to strengthen the presence and a refreshing memory. Qadiri and colleagues in a paper entitled "Evaluation of visual disturbances polluting the urban landscape of Yazd's boulevards "have categorized Indicators and reagents to measure visual disturbances [4]. Also Beigi has explored visual disturbances from the perspective of environmental psychology in the facades of the city of Tehran; he has stated some criteria for turmoil and found that the existing city facades have a negative impact on the users and mentioned the facades turbulence, dark colored facades and wornout materials as the reasons for it. He has determined basis of his analysis that facade integrity is of great importance for observers of urban spaces; Color and type of materials are important in the next level and eventually facade elements such as windows, entrance and balcony are the third priority. Beigi and his colleagues have considered some of the attributes and indicators to measure the view in their research [2]. Also factors affecting urban bodies design have been examined in the paper with an emphasis on aesthetics and environmental dimensions (Case study: Oeshm). The results showed that from the perspective of public and experts in aesthetics dimension, fitness, cleanliness, balance and order indicators, in objective dimension, attachment to the place, and in subjective dimension meaningfulness, tranquility, readability and attractiveness are priorities of landscape beauty [21]. In another study aesthetic functions in creating citizens' mental relaxation in the Region 6 of Tehran were studied; in this paper, emphasizing the urban statues, regional parks, lighting, street furniture, changes in land use and local cleaning, is presented to improve the current situation [22]. In general, each researcher has introduced a variety of factors to measure and evaluate the physical quality of architecture and facades utility. Tthis paper has attempted to identify the most important of them and use them in the analysis (Table 1). According to the above less research can be found which has discussed the psychological effects of facades and disturbances causes in old and new facades comprehensively and compared the psychological effect of those textures. So considering the importance of this topic, the present paper has discussed this issue.

Physical indicators of urban facades related to measuring and desired quality of façade.

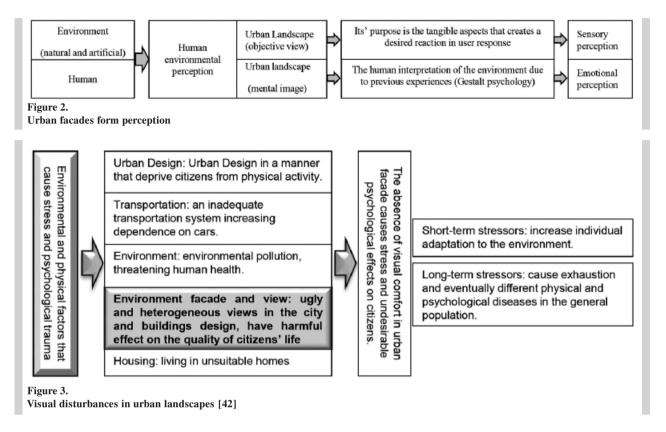
Table 1.

Physical indicators of urban facades related to measuring and desired quality of façade

Indicators	Theorist and reference	Indicators	Theorist and reference	
Symmetry	[23]	Favorable continuation	[23]	
Collectivity	[23]	Closeness	[23, 33]	
Unity	[23]	Security	[2]	
Order	[23, 24, 25]	Inconsistency	[2, 23, 27, 28]	
Pollution	[26]	Proximity and similarity	[23]	
Coordination	[23, 25, 27]	Shape and size	[26]	
Color and material	[2, 26, 28, 29]	Skyline and sky vision	[2, 27, 34]	
Utmost simplicity	[23]	Integration	[25]	
Regular visual complexity	[23]	Annoying	[28]	
Proportionality	[23, 26]	Disproportionate	[28]	
Rhythm	[23]	Healthy	[28]	
Dynamism	[23]	Calm	[28]	
Edge	[23]	Sign	[23]	
Happiness	[2, 28]	Fear	[23, 28]	
Confusion	[2, 26]	Beauty	[23, 26, 27, 29]	
Brightness and resolution	[23, 25, 26]	Anxiety and Stress	[2]	
Regular texture and shape	[23]	Compressed	[28]	
Vitality	[24, 30, 31, 32, 33]	Resolution of readability	[26, 35, 36, 37]	
visual organization proximity law	[23]	Diversity	[36, 38]	
Similarity	[23, 27]	Texture and decoration	[26]	
Brevity, shortness	[23]	Dirty and defaced view	[25]	

# 3.2. The Importance of Attention to the Urban Facades:

In today's cities the viewer minds tired and annoyed with lots of information competing to attract this attention [39]. Urban facades are mainly two-dimensional that rarely interact with the surrounding space and mostly are covered the statue to the city like a thin tissue and gorgeous robe. These facades decorate the city, covering its ugliness and incorporating the beauty and art to the statue of the city [18]. The city face have great influence not only on the human's spirit but also on economical structure, social relations, physical health and the quality and taking advantage of life [40]. Visual pollutions that occur in urban areas, create mental distress and mental illness in human in long-term. Heterogeneous buildings with adjacent texture, increasing the volume of outdoor advertising and neglecting the consistent manner of decoration and beautification of the city over the past years have transformed the cities texture into a confusing and tedious perspective. The quality of human life depends on the types of messages that are retrieved from the environment and their surroundings [41]. According to some researchers the most important factor in urban design is focused on providing visual comfort [42]. In design and the process of improving the environmental quality, enhancing the visual quality of public areas of the city to enhance the quality of people presence, is in a high position, as the form and face of cities is exposed to continuing people view, and affect the morale of the people by sight more than anything else. Visual comfort is also an important component of the safe built environment. In other words today, the interaction between environment and human is obvious. The rapid expansion of cities and the constructions which are governed by designer and builder's tastes rather than urban appropriate legislation, have caused nothing but turmoil and disruption to the urban context and face. So here the real issue is examination of the relationship between the urban facades and psychological features of observers.



# 3.3. Urban Facades and Landscapes Perception:

Perception can be seen as a purposeful process in which an individual gets the environment postings and is derived from the culture and structural values governing the human society. In this regard, environmental perception is a process in which human receives necessary data and mental assumptions from the environment. Environmental perception is associated with human understanding of the environment [43] and accordingly it is the result of the interaction of sensory and cognitive perception [23]. Human perception of view plays a decisive role in creating a sense of security among citizens towards the urban environment [26]. The impact of the environment on human is shaped by way and quality of human perception of the surrounding environment. The environmental perception is one of the first results related to human exposure to the environment based on human knowledge and information of shapes, spaces, function and their exoteric and esoteric meaning. This perception makes humans different levels of communication with the environment, such as a sense of identity, a sense of joy and happiness, feeling of sadness, pride and humiliation, domination, alienation and other psychological feelings and communications. Each of these emotions is the fruit of a relationship that establishes cultural principles and values of human or hidden or embodied values in the environment [44]. In fact, the environmental perception can be seen as space observer perception of the environment objective aspects. So urban facades perception form is an interaction between the individual and the environment changing each of these two factors the result will be different. Facades impact on citizens can be examined in both of objective and subjective aspects [33, 45] (Fig. 2).

# 3.4. Visual Disturbances in Urban Facades (Visual Pollution):

The concept of visual pollution refers to the existence of any commotion and undesirable visual quality in the city [25]. In the meantime, organizing and enhancing the environmental comfort of urban spaces by reducing the pollutions and visual disturbances need indication, identification and measuring the status and availability of visual disturbances.

The effects of facing landscape and urban facades if there are some perturbations lead to increasing anxiety, tension, stress and depression. Different environmental and physical factors can cause tension in the city. One of the most important of these factors is face and landscape of the environment (Fig. 3).

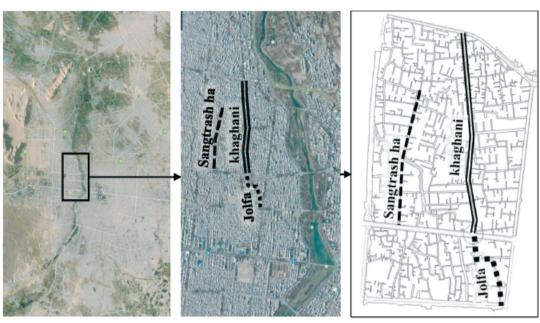


Figure 4.
Studied areas in Isfahan (Source: authors and Google map)

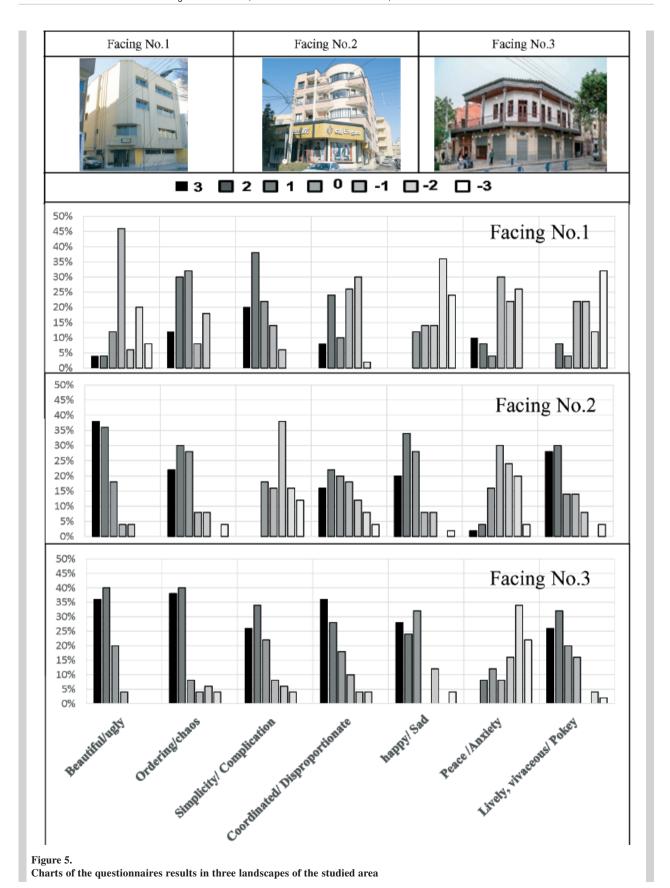
Parker [14] in his study highlights that ugly and divergent views in the design of cities and buildings have destructive effects on the quality of citizens' life. Increasing crime, violence, reducing physical and social activities, reducing security and the quality of life can be seen as the devastating consequences of urban facades. On the other hand the beautiful, charming, clean, indigenous, and in accordance with native and cultural factors can increase the society health and resiliency in front of changes. Environmental beautification can improve physical and mental health and the quality of the population, and prevent violence in society.

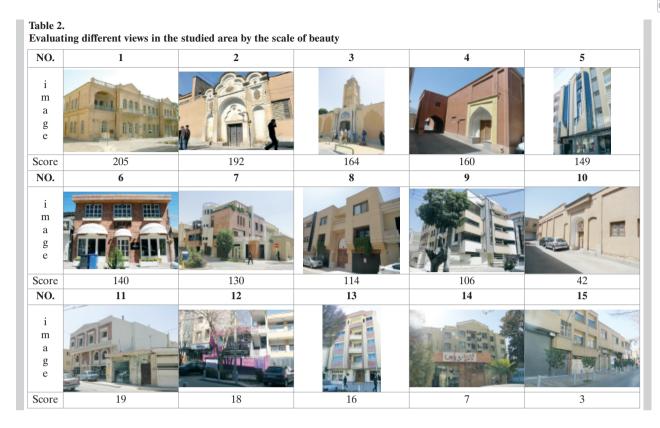
# 4. CASE STUDY

Jolfa is one of the historical and touristic contexts of Isfahan [46]. Shah Abbas ordered a portion of lands in south of the Zayandeh Rood river that was attached to the court to be donated to Armenia in 1024 AH. So the Armenian neighborhood "New Jolfa" was formed in this place. Shah Abbas allocated to Armenians some privileges related to legal, tax, commercial and religious issues [47, 48]. New Jolfa whose land was flat and proper to urbanization was developed shortly and its neighborhoods were formed and homes, schools, shrines, baths and churches were built there [49]. Today this neighborhood is a mix of organic texture left from previous periods and checkered texture of contemporary

developments. This area is geographically located in the southern part of the Zayandeh Rood River. As shown in the figure the outer boundaries of the neighborhood are composed of Tawhid Street from the East, Hakim Nezami Street from the West, South Mehrdad Street from the North and Nazar Street from the North. Distinctive features of this neighborhood like social context, design structure and so on have made significant differences between this neighborhood and other neighborhoods in Isfahan and turned it into one of the most typical and most vibrant neighborhoods in Isfahan [46] (Fig. 4).

The reasons to select this area can be noted as historical, cultural, religious, economic and of tourist importance for Jolfa and turmoil and visual pollution in a part of the new buildings contradict the historical part of the region. Jolfa includes several microneighborhoods (such as the French Quarter, masons, Tabrizis, Khaghani and Jolfa); this paper studied field three facades (masons, Jolfa and Khaghani Street) with an approximate length of 100 meters. Each of these facades have been selected of the old, combination and contemporary (modern) contexts respectively, to compare between the old and new facades impact on the morale of citizens properly (Fig. 4).





### 5. RESULTS AND DISCUSSION

As mentioned in theoretical foundations and research background, in developing the questionnaire, indicators had been used that are derived from earlier researches. The effect of the studied facade, facades and neighborhoods on residents is analyzed in the following.

# 5.1. Effect of Different Views Individually

In this part three different views of the intended area have been selected and evaluated. The first questioned indicator was the spectrum from beautiful to ugly. The beauty is the same quality of emotions excellence and brilliance of mind that is associated with the sense of aesthetic and external visual impact: and on that scale looking for the proportions of the elements in the human dimensions that creates prosperity and welfare in spatial relationships with the environment [25]. In terms of residents' views landscapes 2 and 3 are beautiful. Based on the results we can say Abraham Molesworth theory that believes the pleasure of the physical environment message is dependent on the structure and content of the message; In fact, the message is more regular, is more conceptual and more enjoyable [8, 51]. From this point of view, landscapes 2 and 3, are more regular and consequently have more sense of calmness, happiness and vitality. In general, more complex orders are more enjoyable, whatever the multiplicity of meanings is more, the environment is more enjoyable [50]. According to some researchers attributes such as inconsistencies, disproportionate and compactness, cause fear [52]. Landscape number 1 is assessed more Inappropriate, and gloomy and stressful. In examining the different views of studied sample it was found that there is a link between feelings of relaxation, vitality and perception of beauty and order (Fig. 5).

In assessing the beauty amount of views, facades of public historic buildings (school, church entrances and house) and then apartments with curves and buildings often contained symmetry, order, brick materials, green facades, horizontal lines and more monotonous skylines, were selected by residents respectively. In their opinion, the stone, high, monotonous and with unconventional colors buildings have the lowest scores (Table 2).

The results show a significant link between the perception of beauty and the sense of calm. Also the bustle and clutter are one of the causes of anxiety. Generally have people Jolfa considered historical or in harmony with the historical buildings more relaxing. This suggests that contemporary architecture

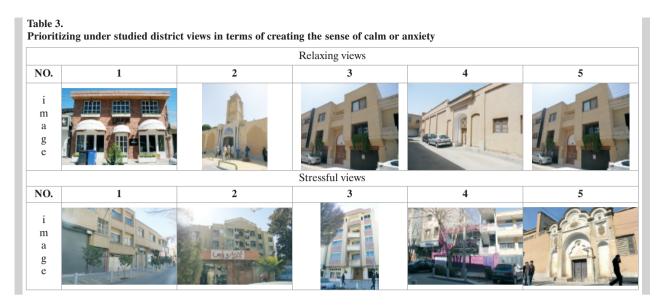


Table 4.

Priority and score of facade materials and elements with the measure of tranquility

Materials	Brick	Thatch	Wood	Stone	Cement
Score	283	200	178	134	94
Facade elements	volumes form and combination in facades	The same height in facades of adjacent buildings		Consonant buildings color	The same kind materials
Score	139	133		122	106

and modern materials do not have the desirability of historical architecture and local materials for residents of this district (Table 3). City landmarks remained from ancestors are as signs that help us to restore our existence and dependence on each other and define our collective identity [41]. The results showed that to people living in the Jolfa section of Isfahan, historical architecture and domestic materials produced higher satisfaction compared to the contemporary architecture of the area. The difference in results in this section and those of the study done in Tehran by Beigi et al can be due to factors such as satisfaction of historical places, lack of quality in contemporary architecture in Jolfa compared to Tehran, difference in culture and views of responders. According to data obtained in this study, unlike the results of previous studies [2, 21] old materials have a more relaxing impact on the citizens and modern materials (stone and cement) are stressful for them (Table 4). Often confusing forms with visual disturbance attract the audience's mind and will follow a feeling of fear, anxiety, fear and trying to leave the area as soon as possible for him. In contrast, the form that has balance and relaxation will be attractive and reliable for citizens [26]. From the perspective of audiences, volumes form and composition in views have greatest impact on creating tranquility. In general, natural colors and local materials are more accommodating with the general mood of citizens in this neighborhood; therefore, the use of unconventional colors can cause anxiety (Table 4).

#### 5.2. The Impact of Facades on Residents

Some reasons for panic include inconsistency, heaviness, irregularity and community aversion [52]. The results show that public discontent with the form of new facades in this area. Based on the results analysis, the compact incoherent, inconsistent and irregular municipal body causes esthetic, lack of relaxation and anxiety. By analyzing data, the relation between the sense of anxiety and lack of coordination in height, materials and colors can be clearly indicated (Fig. 6).

Comparing Charts show that the facades with monotone height and design are not only more relaxing for audience but also they create more joy in them. It should be noted that the presence of shops and lighting are other reasons to create happiness in these facades. The results show that in the design of urban facades not only single buildings but also the connec-



Figure 6.
Image and charts of indicators evaluation in the facades of studied area

tion of the buildings adjacent to each other is important. The concept of cohesion refers to clarity and comprehensibility of forms, elements, parts and components of buildings and the relationship between them. The existence of rhythm, a clear statement of infrastructural rules of design in design and thematic continuity in design, are some signs of cohesion in the design [5, 53].

# 6. CONCLUSION

The results revealed that the urban facades can cause different emotional states such as happiness, sadness, anxiety and its vitality. Physical components as the main constituting elements of the city, generally are formed under the influence of different needs. One should always bear in mind that chaos and confusion, lack of coordination, ambiguity and inconsistency, confusion, multiplicity and contradiction in the body cause stress and lack of tranquility in the city. In general disharmony in form, height, color and materials are the most important factors influencing the psyche of the citizens. Also for the people of Jolfa region, historical buildings and contemporary buildings have been built in harmony with the context, are of a greater degree of tranquility and happiness.

Based on this analysis, it was found that in the three studied facades, Jolfa facade has a more sense of lively and security, sculpture and Jolfa facades have an equal sense of relaxation, and Khaghani facade has the feature of sociability compared to the other neighborhood. One of the factors that creates the sense of calm in Jolfa and sculpture district is more anisotropy in the form of architecture, height, color and materials (mostly brick and Thatch), compared to Khaghani. According to citizens the same form and height and materials such as brick and Thatch in the views are the most important factors in creating the sense of calm. For most people historical buildings and views built with respect to these works are more relaxing. Elements like historical homes, squares, wide walkways, lighting and shopping malls can also create a sense of vitality and sociability.

Because of the stress and anxiety, it can be mentioned lack of cohesion, unity and visual connection between the facades therefore in line with new constructions in and similar areas. Paying attention to things like the context (proximities, desired similarity and continuity in the form, skyline, colors, decorations and materials), balance and proportion (in volumes, parts, number of floors, height), is highly recommended. Also due to cultural, perceptual and cognitive difference of citizens, it is recommended to evaluate the effects of facades in each region separately to offer more practical strategies. Therefore, it is suggested for future researches that these criteria be evaluated for other neighborhoods and cities and statistics results compared together and analyzed.

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