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Rethinking in the Residential Environment's Physical Changes' Pace from Resident's Point of View*

A Case Study in Niavaran Neighborhood, Tehran, Iran

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Abstract

Residential environments are constantly changing. Permanent Changes in the physical properties and residents' constant contact with the never-ending cycle of construction is particularly important in assessing the quality of the residential environment by them. On the other hand, understanding how physical changes lead to interruption, or vice versa residents' effective link with the environment, to assess the quality of the residential environment is essential. However, controlling the type and speed of physical changes in resident's satisfaction have not been enough attention from policymakers in urban neighborhoods. Similarities and differences between the effective indices of residents' affective appraisal in terms of satisfaction scale pace of physical changes, is the main question of this research. The aim of this research is achieving a theoretical framework for understanding the adaptation process and residents' satisfaction with physical changes at different magnitude at residential alleys. Therefore, knowing how the type and intensity of physical changes identify by residents and their affective appraisals, is beneficial for understanding the complex process of adaptation and the factors influencing it. This mixed and exploratory research combined with qualitative and quantitative data gathering techniques such as interviews and morphological surveys over the last twenty years. Field of study was alleys of Niavaran neighborhood in north of Tehran. Qualitative phase of research, provide the question's exploration, data analysis by phenomenological interpretive research method and result's space in low, medium, high and transformed pace of physical changes. The Likert Scale in five point scale questionnaire used to assess the validity and reliability of the results in the main and control alleys and purposive sampling was conducted. Using SPSS software, variance analysis and validation of questions in each species, Post-hoc analysis (LSD) and comparative analysis of six factor of the conceptual framework was done by Kruskal-Wallis test. The results of research approved the experience and affective appraisal criteria in the theoretical framework. But the satisfaction criteria shows significant differences at different speeds. Based on results, evaluation criteria and residents' satisfaction in transformed alleys become different from the other cases. Because of the qualitative nature of getting resident's experience in different environments. It's running in the same neighborhoods can be a good background for meta-analysis studies and achieve a theoretical framework responsive to the same conditions of the Tehran metro polis.

Keywords

Magnitude of physical changes, Pace of changes, Affective appraisal, Stisfaction, Mixed Method research.

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Introduction

Residential environments are constantly changing. Change height, mass ratio and space, envelope, uncoordinated and endless cycles of constructions and some processes like apartments and tower construction are samples of these gradual changes in residential environments. Psychical policy isn't so taken into consideration in order to guidance the magnitude of physical changes for residents' satisfaction yet. On one hand, the experiment process of the physical changes on the residents' mind can't singly understand by morphological analysis, on other hand, obstacles ahead in process of residents' understanding from physical changes and inefficient in satisfaction measurement from magnitude of physical change based on quantitative methods can be considered from above issue challenges and attention to qualitative and context-oriented methods is necessary (Pendar, 2015: 48). The attention precinct of this article is related to gradual pace of physical changes which has been different and affected thru implementation the urban development documents such as; the detailed urban plan and predominant resultant of the economic, social and cultural conditions. This research has been done by combination exploration method and the type of qualitative and quantitative approach. The qualitative phase with phenomenography approach has been done toward data analysis and in alleys with low speed, mediocre, high and changed. Alleys categories in four speeds done based on survey from residents and quantitative control in order to answers verification. The sampling units are also "alley in rank of neighborhood unit". The target group of the study has been selected among the original residents of Niavaran's district in the age range 40 till 55 years, and was chosen from both groups man and woman. After introduction of phenomenon and background research, has been reviewed the theoretical perspectives related to experiment, affective appraisal and the satisfaction indices explanation of residential environment with aim of conceptual framework explanation in order

to enter the context of field studies.

Data collection has provided to the possibility of reaching the theoretical framework by in-depth interview technique and analyzes and extracting the experience structures and consequence spaces in each species- alleys. In the quantitative phase of research were examined reliability and validity of qualitative phase findings in closed questionnaires format and divided in each of species. Then, the proposal framework has been surveyed based on variance analysis with the Kruskal Wallis test and the quantitative results have been discussed compared with similar research. The final resulting has been accompanied to answer the research's questions with practical suggestions in this field.

The background research and previous studies can be placed into two groups based on their expected goals;

A- Understanding the affecting factors on the formation of the human communication with the changing the environment and evaluation it: Marcus has particularly emphasis that how the physical display of the house can be used as an expression of one's personal identity. He declares in researching format: When listened more to the views of the people, more determined which they are consciously or unconsciously using your home environment as an instrument to express something about themselves (Marcus, 1995: 9) when the owners do customize their territory and boundaries, the symbols transferred the concept of ownership and to retains the identity sides of Individual and group. Hence, the physical environment can be as symbol while the values transferred to another. (Brown and Werner, 1985. P: 560)

B- Ranking and determining the affecting factors on the evaluation and satisfaction of residents from neighborhood unit: Based on research Maran and colleagues (Maran et al, 2009:6) in 4 neighborhood units which are different in terms of growth patterns and social -space traits and houses species. The results of 398 interviews by questionnaire has been done as quantitative and by correlation method,

that positive assessment from neighborhood unit isn't necessarily related with interest to place but it had been in positive relation with feel of it like home. In other study (Ogu, 2002) has shown while changeable and various components of home have positive role in residents' satisfaction generally, but alteration in environment with negative effect is participant in satisfaction level. (Nortaghani, Faridani & Pourdeihimi, 2013: 8) also Hur was seeking for evaluation of specifications physical in a research university and has had special attention to spatial analysis in residential tissue with morphological approach. The results have shown the meaningful relationship between these specifications and affective appraisal (Hur, 2008: 2).

Research questions

What is characteristics explanations theoretical framework in affective appraisal and residential satisfaction adaptation with magnitude of physical change different speeds?

Answer to the below questions is necessary for this purpose;

How criteria are formed the resident's experience and evaluative narration from magnitude of physical change for during the time?

How can understand and interpret effective factors on residents' satisfaction from magnitude of physical change experiment in different speeds?

Theoretical framework

The study of theoretical perspectives has been done on two main axes in the relationship between man and his environment. First; resident's emotional evaluation of the physical changes over time and concepts related to perception of changes and change cycles. Second; satisfaction of physical change drastically. The aim of this study was to determine the criteria for process of residents 's qualitative assessment of the cycle of physical changes that occur gradually and in a meaningful timeframe.

• Change of physical environment

Issues related to the physical transformation such

as figure and ground, density and height, closeness and construction cycle can be repeated cycles often play an important role in residents' satisfaction. (Ibid: 16); (Fig. 1). Construction cycle consists of four steps can be attributed to several species of experience and evaluated (Fig. 2). So, physical environment for reasons, including the importance of living place and change of perception needs special attention.

• Concepts related to change of human and environment's relationship

One of the most important issues in the relationship between human and the environment

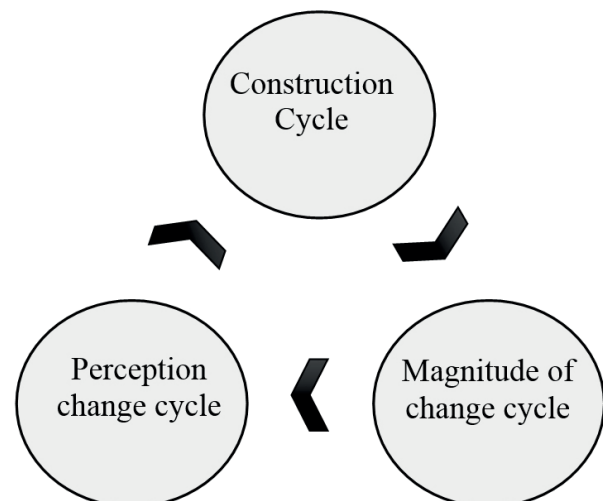


Fig. 1. The cycles of construction and related issues. Source: authors.

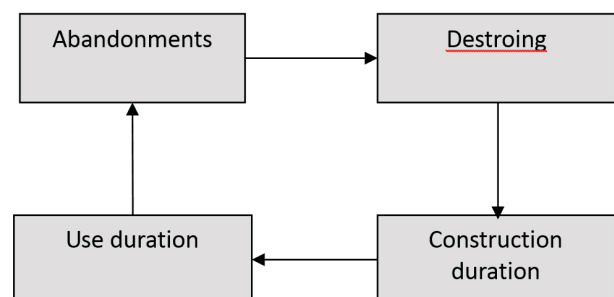


Fig. 2. Construction cycle in residential environments. Source: authors.

is necessity of maintaining a coherent story (Sarbin, 1983, cited in Korpela, 1989: 248) or maintain the coherence of the conceptual system (Epstein, 1983, cited in Korpela, 1989: 250) that character theorists pay attention to it by phenomenological approach. (Korpela, 1989: 242) Since the effect of changing environmental factors on the basis of one's own internal activities is processed, according to maintain a coherent story residential environment and its changes will be necessary in the minds of residents. (Vuorinen, 1983, 1986a, 1986b, cited in Korpela, 1989: 248). Based on the idea of environmental self-regulation, environment is more than just a mediator in the regulation of social interaction. Another concept that man-made environment and ongoing assessment of individual identity in relation to the interaction of the environment is self-extension.

Belk believes that the places where they live and the changes that people interact with their values where that expression of wide-residents. (Belk, 1988: 140) Clare Cooper Marcus physical shape home where they live as an expression of personal identity knows residents. On the other hand the alienate on person with his environment always sought to restore and recover their lost identity during the changes. (Ibid: 1)

• Environmental experience and perception's change

Perception is a psychosocial phenomenon that arises from experience of the environment. Continuous experience of a residential environment leads to

formation of new standards and changes in people's perception of physical change. According to Nasar (2011), based on the theory of adaptation level, the perceptual environment reflects people's experience of changes over time as they adapt to the stimuli around them. Since environmental preferences become stable over time, public preferences are somewhat predictable (Stamp, 1997).

Key concepts associated with change in perception are summarised in Figure 3.

• The affective appraisal of residents by changes experience

Since the magnitude of physical change circulation is continuously in ranging from low to high, and also the affective appraisal of residents occurs based on conformity amount with them and as permanently. Hence "affective appraisal theory" (Russell and Pratt, 1980: 311; Russell, et al, 1981: 261) and "level of adaptation" theory (Helson, 1964, cited in Nasar, 2011:164) are taken into consideration, the affective appraisal is judgment about the location's ability for changing and transformation in emotions.

(Russell and Ulrich, 1984:120). thus, the related sciences with environment design is required including urban design while as far as possible to recognize the impact of location physical characteristics on image of the people's evaluative. (Nasar, 2011: 165) From effective factors on person evaluation of environment, in addition to the personal features

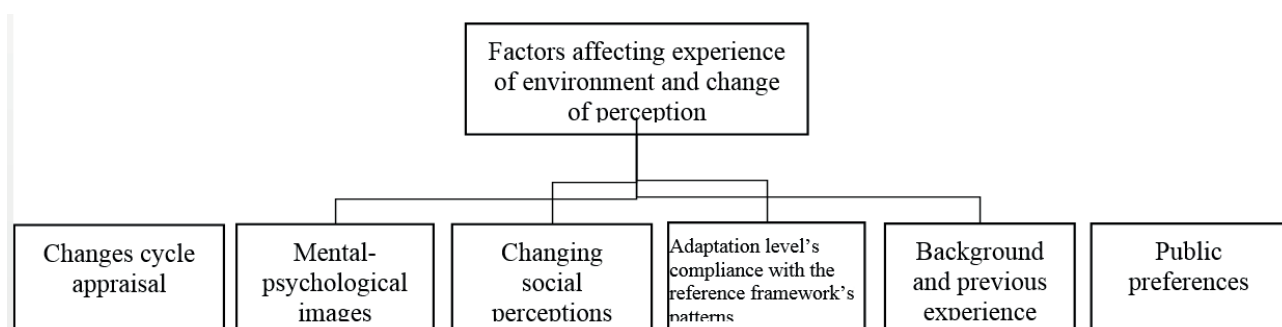


Fig. 3. Factors affecting experience of environment and change of perception. Source: authors.

and physical – social characteristics can mention to place importance for person and his or her familiarity measurement with place and plans for what will he or she do here (Russell and Ulrich, 1984: 122). According to conformity level theory by Helson in 1964, Judgment in relation to a component has always depends on judgment background, including pervious faced components and environmental components (Russell and Ulrich, 1984:120 and Wolhwill, 1974: 127).

The conformity level theory has refers to sensorial experience role. Thus, Perception of things such as size, time and value is variable based on experience. People who are in a crowded place will be adaptable with crowded and different standards makes in mind. But conformity makes cost, especially if irritations to be unpredictable and out of control and in person evaluation from environment changes are effective that it is multi-level process (Nasar, 1994: 378).

• **Satisfaction and severity of physical change**

Satisfaction achieved of conversion of objective to the subjective experiences and evaluate their compliance with previous standards (Amerigo and Aragones, 1997: 47 and Marans, et al, 2009: 6). Despite repeated some species not yet become the reference patterns for the residents and the people they are dissatisfied. Whereas some species become gradually and at different periods of time and reference patterns are unsatisfactory (Cao, 2015).

Providing a list of factors impacting satisfaction solely on the basis of previous studies, but should be based on queries from residents in any residential environment (Van poll, 2000).

Physical changes shape residents' cognitive and emotional responses of the general terms and dominant presence in the environment and experience is gained (Nasar, 2011: 163). Adaptive behavior which is influenced by cognitive and emotional responses in accordance with the needs and expectations of the residents is derived from satisfaction. Jack Vega criteria outer resolutions on the scale of neighboring units into three groups: physical, symbolic and classifies schema (Nasar, 1994: 377).

• **The conceptual framework**

has extracted from within the qualitative questions of research, concepts and theoretical models. Receive residents' experience from magnitude of physical change is requires to analyzing conceptualization process such as specie diagnosis and intensity of changed factors. This phase begins by visual inference of changes based on person's characteristics and experience and sensation from residential environment. The sensation – centered of conformity with patterns of mentality reference frameworks in order to perception environment conformity from "environment as self" recognition basis and feeling physical dynamic characteristics during time.

In phase of affective appraisal after formation personal and social narrative of changes, the regulatory factors will change to increase or decrease in order to conformity level and proportional by new condition. Self-appraisal and others with magnitude of physical is also introduction of conversion the visual receives to mentality and cognitive and emotional evaluations. In third phase by gradual forming the effective criteria on satisfaction for during time, the residents pays to understanding and interpretation based on their. When the sensation experience from magnitude of physical change is led to the formation of coherent story, self-regulatory and self –widespread consolidation and its consequences is adaptive behavior and participation, provides the background for satisfaction the magnitude of physical change and attitude adjustment and the formation of mentality standards in accordance with it. This process is repeated as cyclic in various levels; abandonments, destroy, modernization and resettlement each one of buildings in detail and alley and district in generalities. This framework is based on qualitative studies on the study context via case study method and by phenomenological approach. (Fig. 4)

Research Methodology

With reference to the complex and multidimensional

essence of research topics, can be said, this study is involving deep understanding and analysis of the qualitative and value loading the phenomenon related to changes' pace of physical environment from residential environment. Accordingly, this study was carried out by combination of qualitative and quantitative method. The qualitative phase has been with phenomenography approach toward data analysis in alleys of Niavaran's district. Current research is the coding qualitative data in format of exploratory sequential design. (Fig. 5).

the conceptual framework or structure to the research's subject and it's assumed on being sustainable. Since the subject of this study is investigating the lived experience by this assumption that homogenization and semanticization people's experiences is requires to internal realization of these experiences, the research tradition of phenomenography is selected for data analysis, the phenomenography in comparison with phenomenology which looking to receives the resplendence reality on people, pays to classification the people's perception of reality (Gall & Borg, 2007). Data of in-depth interviews with original residents were analyzed and implemented in each one of quad paces. After implementation the interviews, for regular and logical data analysis, by utilization of theoretical coding method and afterwards by analyzing and comparing these codes and subjects together and recognize their differences and similarities, descriptive categories or theme became evident to obtain a more complete picture from different concepts of the quad samples.

Quantitative Collecting quantitative information in order to morphological analysis inclusive how mass change, height and space, and density and synchronic construction cycles makes possible in analysis of the relationship between residents qualitative receive from magnitude of physical change and visual fact.

The result analyses method of the questionnaires is variables correlation test. The question of close questionnaires having score from 1 to 5

and invariable grading scale is from very low to very high, according to the responder agreement. Once, descriptive statistics were done without control alleys and once by them. In case of dispute unacceptable were recognized the factors that caused the error. After analyzing the qualitative data and compliance by documents and forms data, according to structure an extracted experience from the qualitative research section was prepared quantitative questionnaires with close questions in order to an exam of reliability and validity results.

Field study

The study was conducted in Niavaran, an old neighborhood of Teheran that has experienced a varying pace of physical change. Rapidly rising house and land prices, high rates of garden and housing degradation, and increase in the number of high rise buildings has led to the destruction of environmental quality and local identity, especially over the last 20 years (Fig. 7). Some alleys have changed slowly and continue to partly retain their former identities (Fig. 8) and many of the original residents remain despite the trend to gentrification of the neighborhood.

Twelve alleys were selected for inclusion in the study representing three different rates of change over the last 20 years and completed transformation (Fig. 6). Four of these served as controls for the quantitative phase of the study.

Data analysis

Analysis the qualitative For reliability, depth interviews in two alleys in parallel and independently of one another took place. The main topics coded phrases and content to ensure stability.

Qualitative findings analysis: The main questions had been basis formation the conceptual framework, as six questions were analyzed in deep interview and were converted to descriptive categories. for observance the reliability, in-depth interviews which have been also includes trigger questions, the content coding has done in two alleys of quad paces as

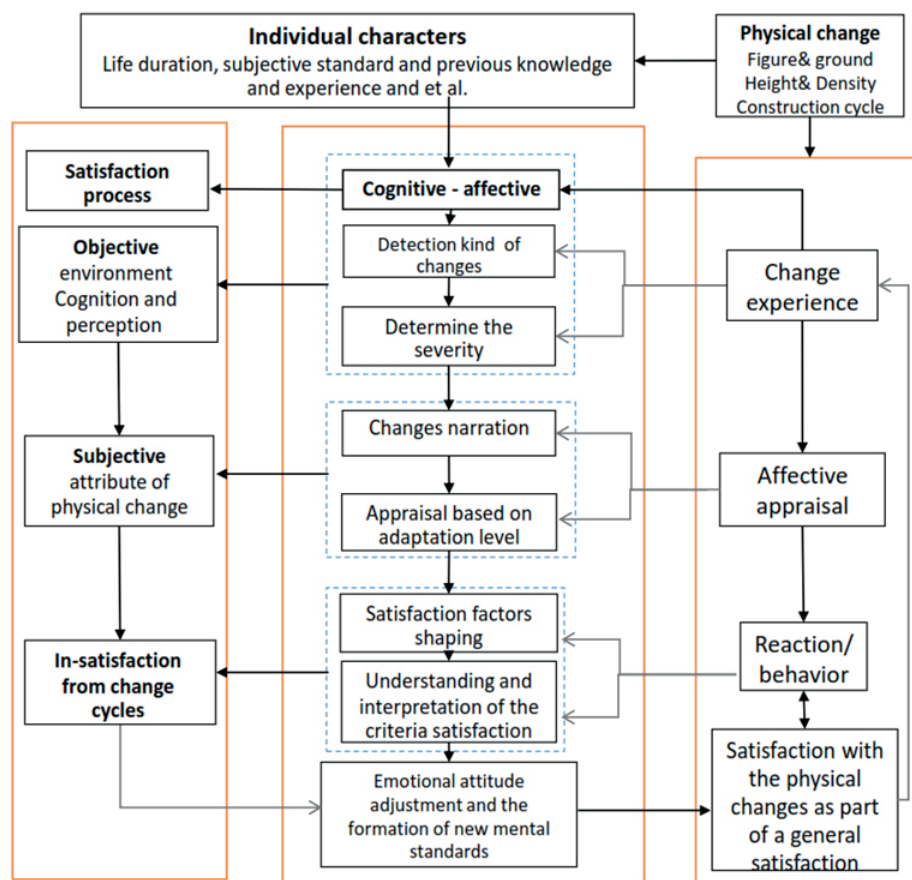


Fig. 4. Conceptual framework for determination residents' satisfaction with the magnitude of physical change. Source: Pendar, 2015.

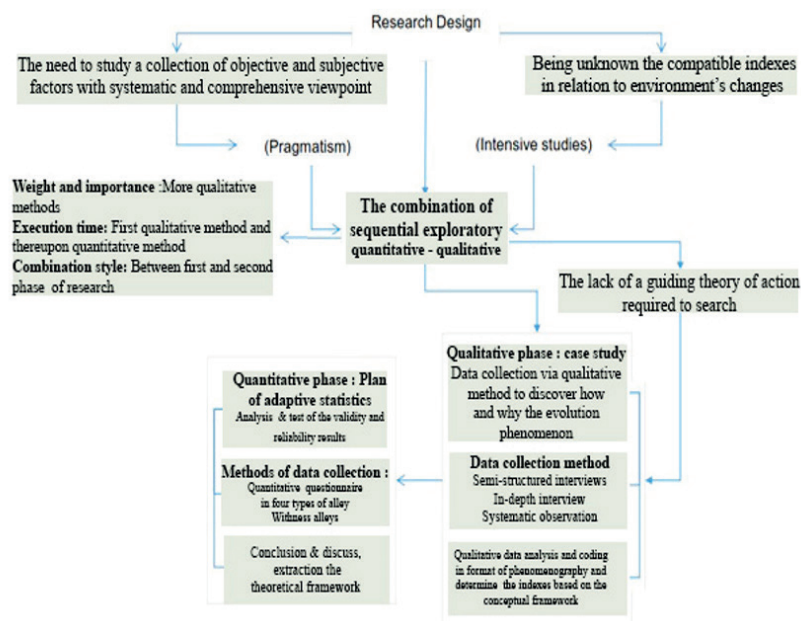


Fig. 5. Combinatorial research design. Source: authors.

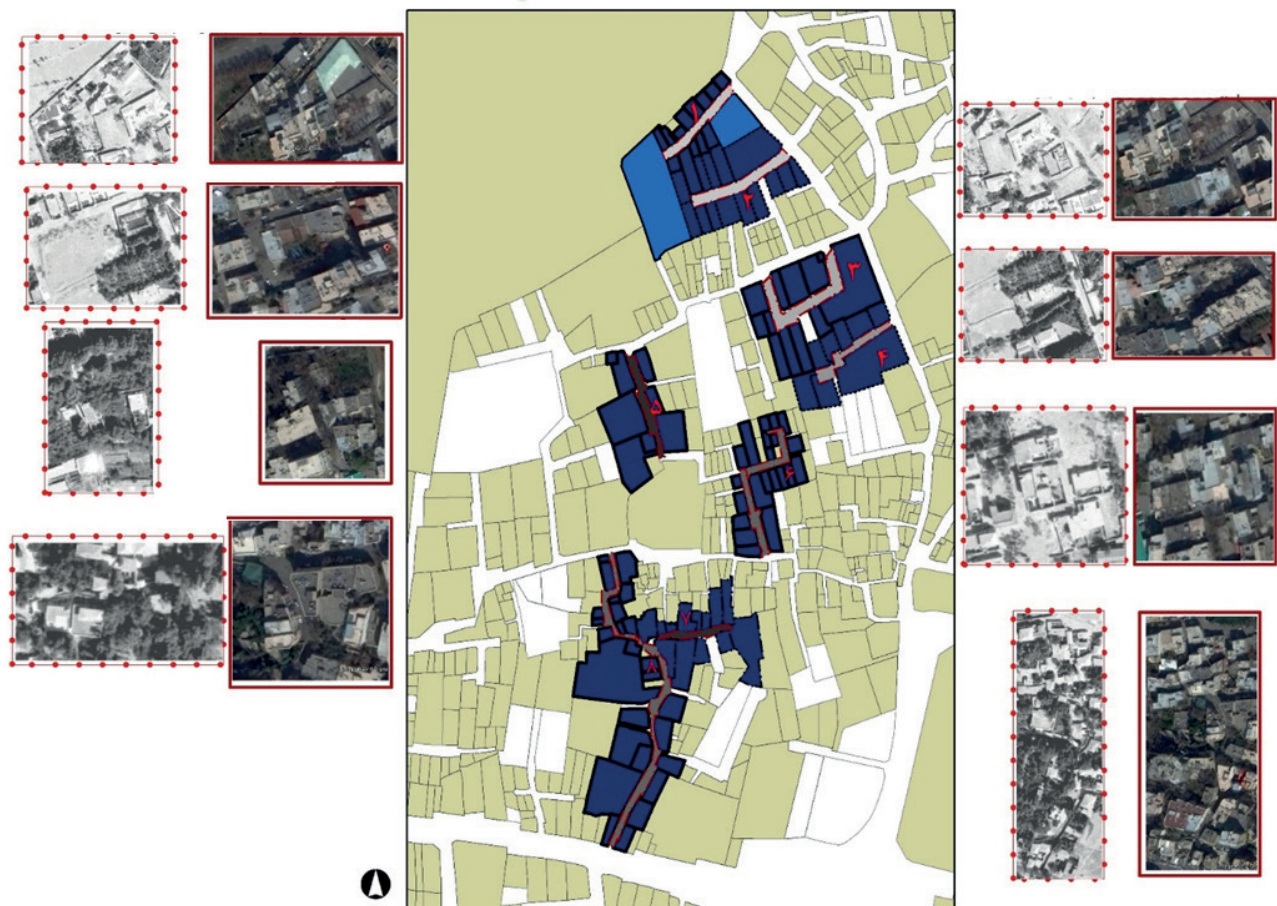


Fig. 6. Categories of study alleys, selected by residents at a rate triple the number of. Source: authors.

parallel and independently of each other, to ensure that the main issues and phrases stability.

The Extraction of category title and concept occurred based on main publication subjects from expressions interview. The findings of the qualitative research section have been represents real experiences of the residents, in quad categories of changes' pace, have formed an integrated conceptual model (Fig. 7). These concepts tested as a basis for preparing the questionnaires of the quantitative research phase in different pace separately; in order to get yield via quantitative data results of theoretical framework.

The resident after environment self-regulatory as a criterion that pays to satisfaction realization and interpretation based on it in changes low speeds, reviews in some of pervious concepts and qualitative concepts of life especially. In high and middle paces, residents than identities of the context architecture which was production of scale changing and it cannot be controllable, having less

sensitive but with change the environment's values has lesser conformity through the experience of pervious identify. During this process; has changed some of concepts and with increasing the changes' pace, takes placed the basis on the diagnosis for magnitude of physical change; Like; changes the house concept to building. In middle pace, acceptance dynamic relation with residential environment in relation to external and internal stimulus is result which the residents get to satisfaction by criteria of realization and interpretation.

With this mentality preparation and with increasing pace, weakening of the past continuity takes place on top attention of residents and found axial role to diagnosis the species of the intensity the changes effect in alleys with high pace. Physical importance and bolded it in realization and interpretation some residents that experienced changes on top speeds caused to converting physical to effective criteria for

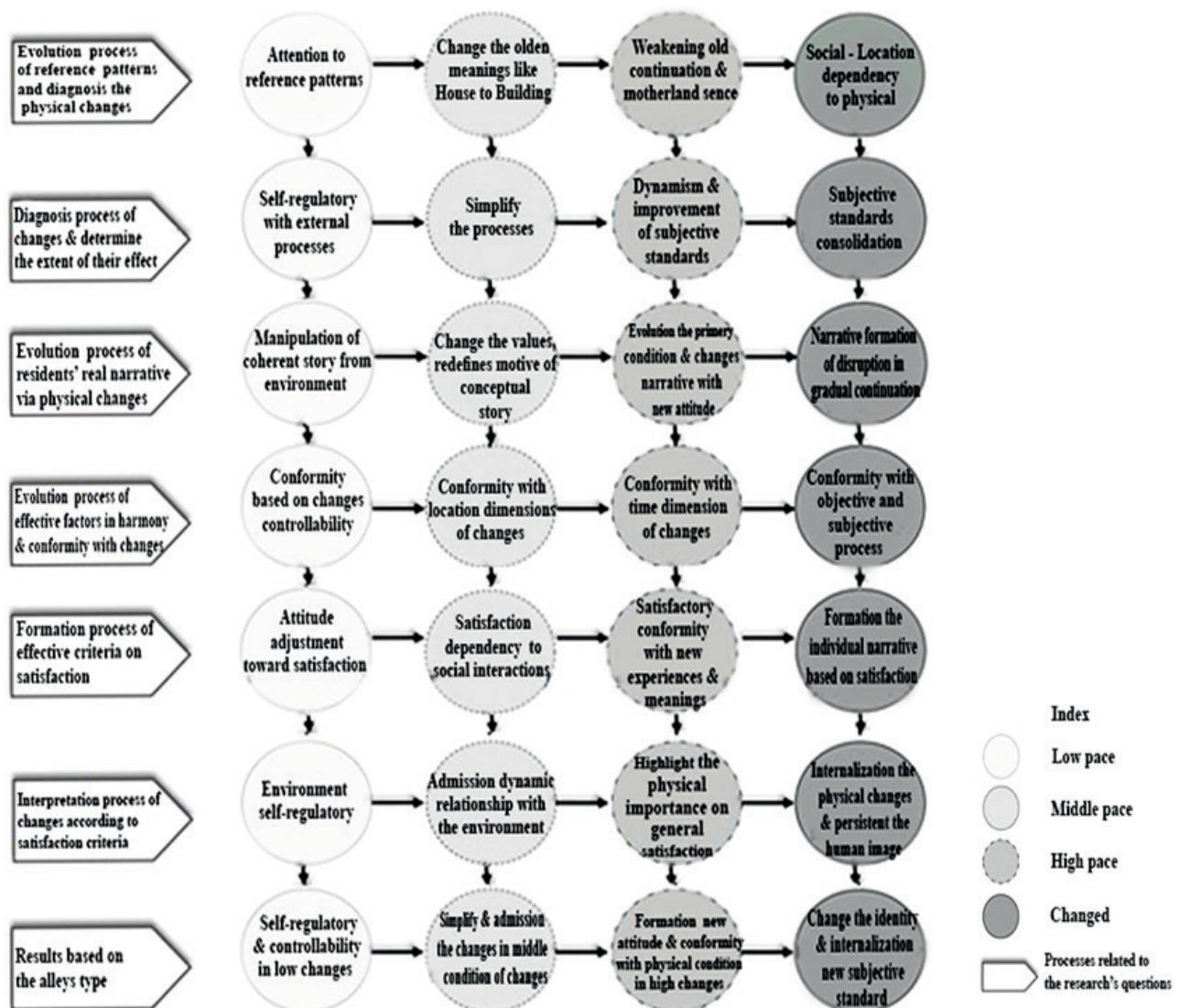


Fig. 7. Summary the qualitative phase and explanation the indexes of the quantitative section. Source: authors.

changes diagnosis . In other words; in subsequent step means alleys transformation thru residents' explanation takes placed the effective criteria toward diagnosis the magnitude of physical changes, change the meanings of spatial -social greatly smacks of physical concepts.

Analysis the Quantitative findings Analysis

These questionnaires completed as separately in each of the four species-types in studied alleys and control alleys and data analyzed by SPSS software in format of variance analyses and paired comparison. Items been dissimilar as separately consisting on 27 items

in low pace, 28 items in middle pace, 49 items in high pace and 40 items in alleys which has been responded in 5 degree format Likert scale and was calculated scores of each concept. Cause to constraints due to lack of residents with intended specification enough or lack of interest for participation in researching job, the sample volume is decreased by 62 (36 in main alleys and 26 in control alleys). The reliability of questionnaires was confirmed by test-Retest reliability in 30 persons group. For validation this questionnaire used two methods as goal table - content, based on sextet questions and context of triple experience processes, affective

appraisal and satisfaction formation, (table 1) and artificial validity.

For artificial validity evolution also specification table and designed questions provided to 5 masters and requested of them till after scrutiny the instrument qualitative presents necessary feedback in case of difficulty level, lack of proportionality level and

ambiguity in questions that amended base on its items

Findings

In order to determines the correlation degree of findings and confirms the conceptual frameworks, recitations analysis to two methods of discrimination coefficient that's mean check correlation level each

Table1. Goal- content table of questioner. Source: authors.

Question content	Type of alley	content Goal
(LED)	A-low race	experience detection (ED)
(MED)	B-Medium race	
(HED)	C- High race	
(CED)	D- changed	
(LES)	A-low race	experience severity (ES)
(MES)	B-Medium race	
(HES)	C- High race	
(CES)	D- changed	
(LAS)	A-low race	Affective story(AS)
(MAS)	B-Medium race	
(HAS)	C- High race	
(CAS)	D- changed	
(LAA)	A-low race	Affective Adaptation(AA)
(MAA)	B-Medium race	
(HAA)	C- High race	
(CAA)	D- changed	
(LSF)	A-low race	Satisfaction Factors (SF)
(MSF)	B-Medium race	
(HSF)	C- High race	
(CSF)	D- changed	
(LSI)	A-low race	Satisfaction Interpretation(SI)
(MSI)	B-Medium race	
(HSI)	C- High race	
(CSI)	D- changed	

recitation with total score of test and loop method that's mean calculate credit coefficient all recitations and eliminated some questions which reduced correlation coefficient in each of questionnaires. The questionnaires' result in quad paces shows that the averages of all variables are identical between two groups; control and test. With the explanation that in the questionnaire "changes with middle pace" only the averages of fourth variable means "affecting factors in conformity by changes" which "attention to the place dimensions" takes place in residents priority, has had important difference in two groups of test and control. ($p=0.097 > 0.05$) in high pace also second variable means "mobility diagnosis and evolution mental standard" toward "determine intensity of change effect" and fifth variable means "satisfying conformity with experiences and new meanings" in order to "process of forming the effective criteria for satisfaction",

having P to order 0.088 and 0.062 have been but can be assumed between two confirmed groups test and control.

Analysis of variables conceptual framework: By comparing the average responses in 4 groups and because of restrictions on the number of samples, analyses done by nonparametric method and Kruskal Wallis test was used to compare each factor. Results shows the average responses three factors "conformity factors with changes", "effective criteria on satisfaction of changes" and "Changes interpretation according to satisfaction criteria "has meaningful different in quad paces.

Assume Concepts responsiveness assumption extracted from qualitative department in main group and controls has been accepted in three factors "changes diagnosis" and "determines effect intensity" and "changes story". Expect "changes diagnosis" which the answers average

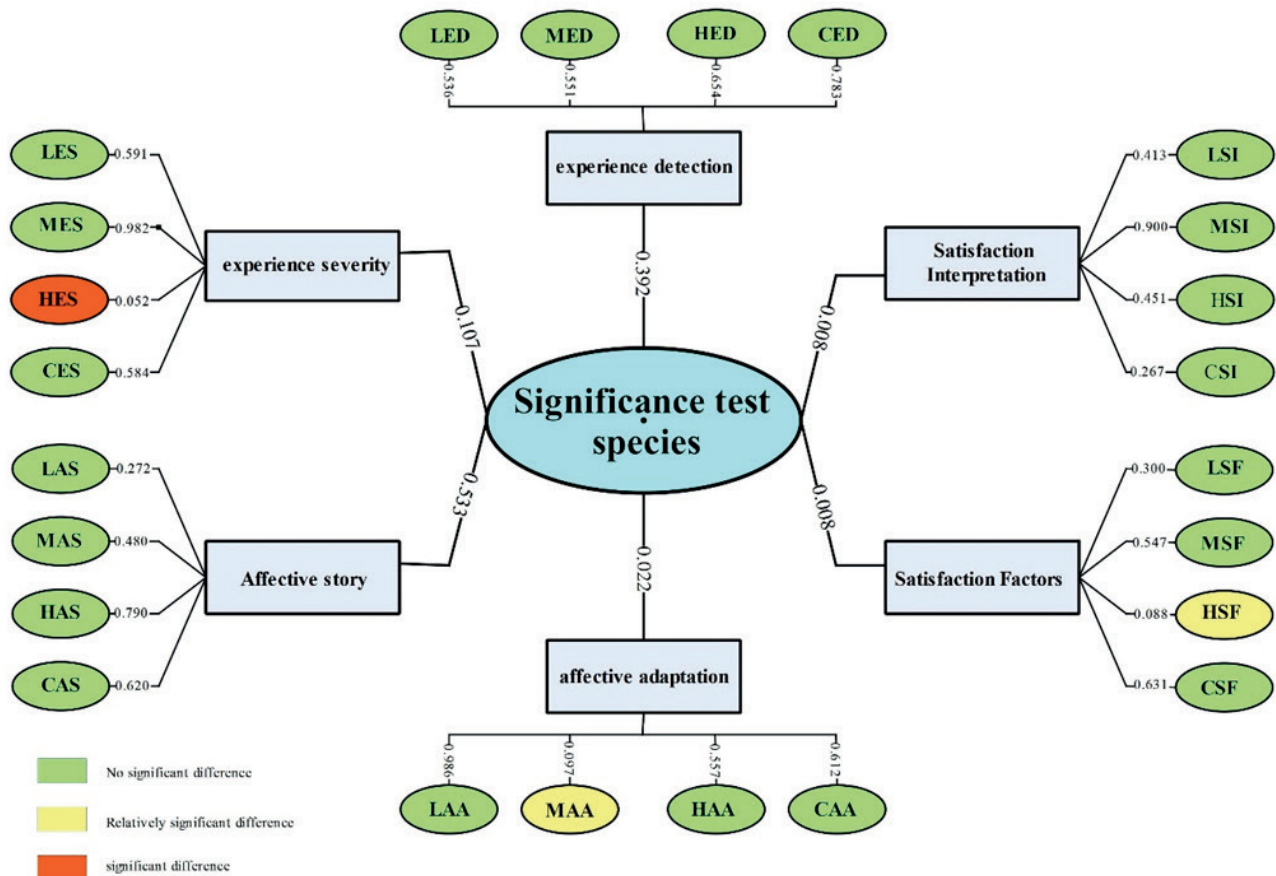


Fig. 8. Chart of meaningful test in close questionnaires items to separate on quad paces. Source: authors.

has been somewhat different in two groups control and main. However, physical subjects recognized by residents via different methods in main and control alleys, but have almost determined and definition subjects affect intensity similarly. But in three factors, second, Sixth factor means “Changes interpretation according to satisfaction criteria” to be control or main of people has had major impact on average answers.

In the following with least significant difference (LSD) can investigate averages difference reason due to: which two couples had been? Hence, assumption of answers averages equality was accepted in first of three factors. Don't need to paired comparison. But among in remaining three factors can be survey to reason of difference on averages thru, which have been two couples, as became of Fig. 11, obtained results from the changed alleys had meaningful difference with others. That's mean can conclude that changed alleys residents have responded to questionnaires differently from other residents, and it's essential that conditions takes under review differently after changing and “ effective criterions in satisfaction of physical change “ factor has significant different of the entire group (Fig. 11).

Discuss

Unlike last researches that generally pay to factor confirmation of effective indexes in satisfaction, answer to the primary questions in current research takes place from qualitative findings test (Phenomenography) to quantitatively method. With regard to result can say; the questionnaires have appropriate reliability and validity and obtained factors in theoretical framework toward experience comprehension, evaluation and satisfaction of magnitude of physical change from resident's perspective, makes opportunity for designer and planners to achieves the significant

issues for residents in the normal process of physical metamorphosis toward policy.

Among residents has experienced the different intensities of physical change, Observed meaningful different in terms of sensitivity than primary shape of life place and bed importance between residents that experienced different intensities of physical change. It seems recognizing the fields of notable residents in changes experience in different intensities, takes shape by a series of conditions and fields. Highlighting the physical important on understanding and interpretation the residents which has experienced high paces, caused to converting the physical to criterion toward diagnosis species and intensity of the changes

Hence, attention to morphology values that formed during years and gradually and in residents' mind converts to reference frame patterns to be attention to the number and type of changes experienced, construction period and the formation of a new totality in the alleys. Observed the meaningful different between resident's satisfactions of changed alleys and other species. In general, in construction period is more attention to quantitative subjects such as number of rooms and spaces area, but after construction and establishment the qualitative subjects is highlighted in framework reference and resident satisfaction is important.

Heterogeneity in change cycles is factor of totality destruction and formation “unfinished construction workshop “as residents mind illustration from residential environment converted to effective factor in residents satisfaction.. From resident's perspective which has experienced the high paces of change, there is reciprocal relationship between abandoned alleys in construction time and lack of livability and vitality. In result, the scheduling of various phases the houses construction in alleys as part of neighborhood unit has especially important.

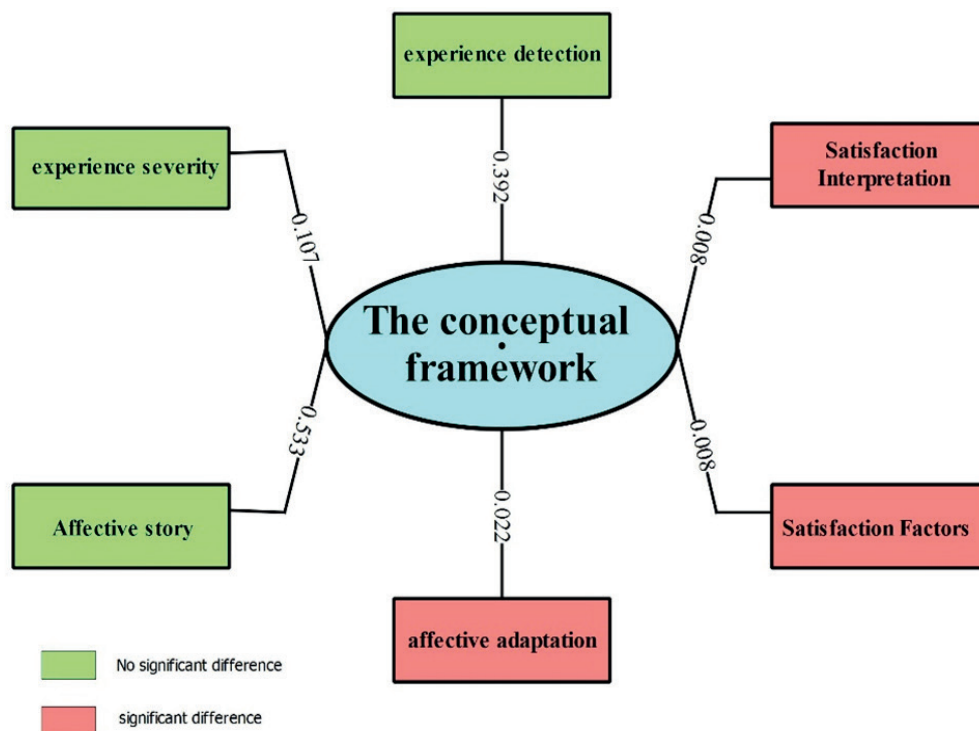


Fig. 9. Chart test the variables conceptual framework. Source: authors.

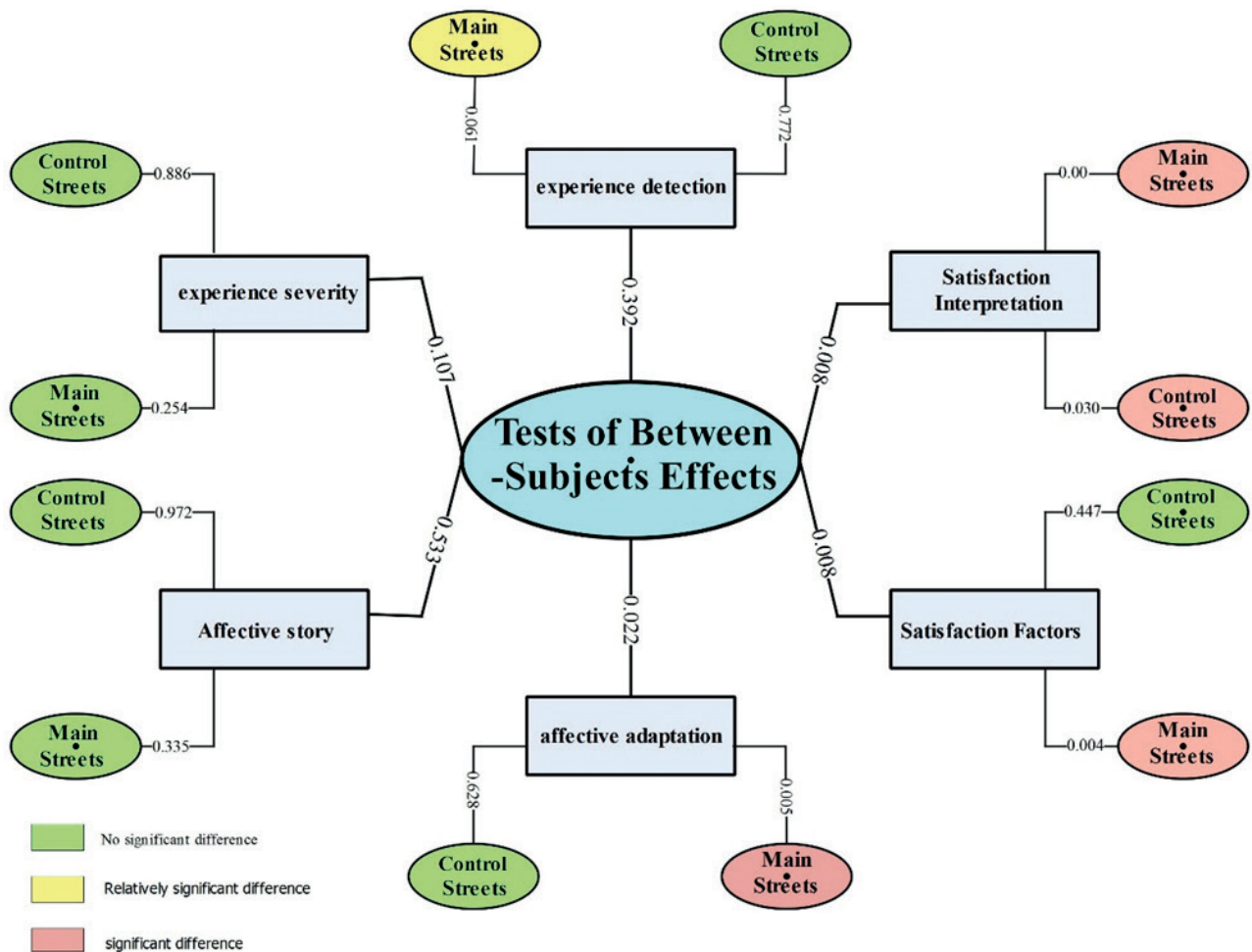


Fig. 10. Independent test factors in control and main alleys. Source: authors.

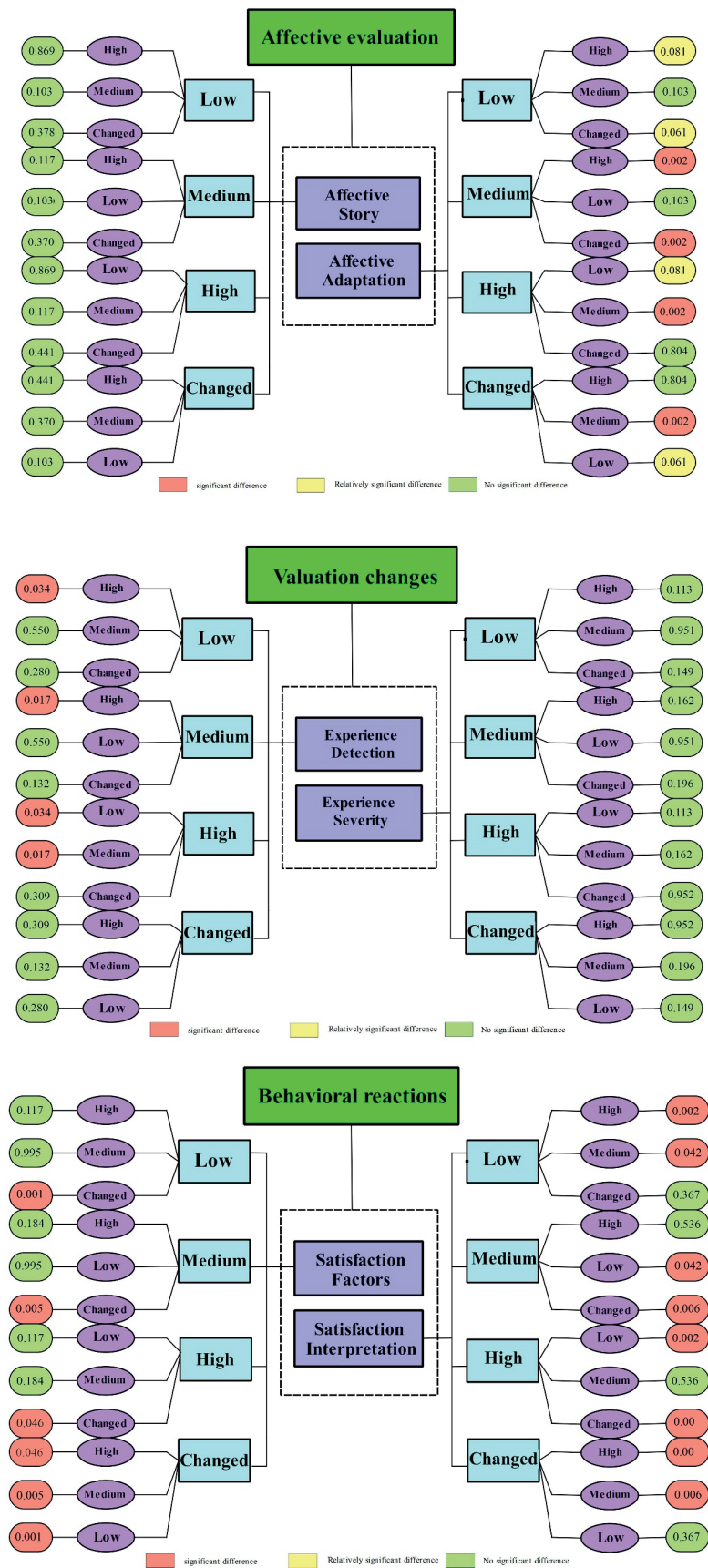


Fig. 11. Comparison the factors couple. Source: authors.

Conclusions and Recommendations

The research results shows, while the pace and intensity of change is controlled and context's values is stable. Residents find sympathy than local identities and nostalgia is gradually forming in frameworks reference. But People's sensitive reduce with intensity and speed changes in top speed. Gives importance to the dependent qualities will not be associated to context maintenance and sustainability and identity. In addition, land and housing investors' volition will overcome on original residents' volition because construction companies power and the lack of participation and consultation of the people in this process. The satisfaction of type and quality physical changes in level of neighborhood units is also relevant to the residential units and local level (Van poll, 1997) based on findings current research, this relation is increasing in low speeds with local level and in highest level with level of residential units.

Based on subjects and result spaces, practical hints about the alleys obtained with different paces which in different levels of physical policy in locals that are more or less passing the Niavaran road, can be useful;

such as architects and urban designers have more attention to mass and volume in subjects but for residents, plant coverage and continuous neighborhood in yard spaces are on top of attention.

2. In Niavaran, some of plant coverage species like plane tree as Semantic - Symbolic quality found physical identity and in the views of the people is importance in forming to space and combination with mass.

3. Plant coverage stationary minimized adverse effects of construction workshops in face and landscape during construction process. That's mean if plant coverage saved from people's vision angle in alley, construction period evaluated shorter and have less attention to its adverse effects.

4. Conjunction yard in alley edge thru physical retreat from first front can be converts to criterion toward changes control in alley level and resident's sensitive to context subjects. Thus recommend, the stationary of the open spaces doesn't limited to 40%.

Endnote

1. low, medium and high

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