



Scrutiny of effects of the form's dynamic forces in architecture on psyche of patients (with mental illness)

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Abstract. This report is done for recognition of the relationship of the dynamic forces of form in architecture and psyche of patients with mental illness. The purpose of this study is the recognition of the dynamic forces of form and manner of their influence on creating of sense of relaxation, vitality and fear and heartache in patients with mental illness. The raised question in line of purposes, it is that "which dynamic forces of form in architecture are effective on creating of psychological feelings of relaxation, vitality and fear and sadness in patients (with mental illness)?" The hypotheses discuss in the study that they are: the static forms and forms with dynamic forces and the soft and weak movement (weak flowing) create the calm sense in patients. Moreover, forms with average dynamic forces and movement (average flowing) create the feeling of freshness and vitality in patients. Moreover, forms with dynamic forces and the extreme movement (high flowing) create the sense of fear and grief in patients. The theory of research is psychology and architecture and also cultural and social. The way of research is descriptive- interpretive and the way of information collection is attributive and purview. The statistic society is the buildings of didactic- remedial (conference and psychotherapy) in Karaj and their Patient with psyche ailment. It is typified the chanceful. The sample corps is ten buildings of didactic- remedial (conference and psychotherapy) in Karaj and their hundred Patients and Observation, questionnaire, conversation, information bank and computer network are tools of information collection. Survey results of patients and studies of documents suggest that static forms and forms with weak dynamic forces(weak flowing)create the tranquility sense in patients and forms with poor dynamic forces(weak flowing)create the vitality sense in patients and forms with strong dynamic forces(high flowing)create the sense of fear and grief inpatients.

Keywords: Architecture, calm, dynamic forces, fear, form, moving, psyche, sadness, vitality

1. INTRODUCTION

The report is done about the relationship of the dynamic forces of form in architecture and psyche of patients(with mental illness). Visual form has the visual characteristics such as shape, size, color, texture, position, direction and visual balance and form, or in other words, each of its visual characteristics have the dynamic forces. In this research is studied the relationship of dynamic forces of these characteristics with creating of sense of relaxation, vitality and fear and distress in patients. Because of the ever-present form and involvement of non-volatile with it, architect, designer and urban planner should always consider the aesthetic concepts of dealt objects. We live while we have surrounded by great visual pollution that is manmade. Living in a neighborhood with troubled views is a barrier for creative inner thinking, the creativity that is causing of progress and human civilization. Two psychological senses of vitality and relaxation are important factors for mental health, the importance of freedom from fear and distress is to extent that even in many verses of the generous Quran expresses as a reward for goods. With Attention on how to create, spaces and architectural form can supplied in part the sense of vitality and relaxation in people. Today, in medical and educational centers so does not attend to provide of psychological needs of people in places and Design of centers are purely functional aspect, but especially in the centers exists the further need to security of psychological needs of man. The purpose of this study is to determine the dynamic forces of form and how of their influence on creating of senses of relaxation, vitality and fear and sadness in patients (with mental illness). The raised questions in line of objectives are that "which dynamic forces of forming architecture are effective on creating of psychological feelings of relaxation, vitality and fear and sadness in patients (with mental illness)?" The expressed hypotheses in the Study are: the static forms and forms with soft and weak dynamic forces

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(with poor fluidity) are effective on creating of comfort sense in patients. Moreover, Forms with average dynamic forces and moving (average flow) on creating the sense of freshness and vitality in patients and forms with severe dynamic forces and movements (high flow) are effective on creating the sense of fear and grief in patients. Attitude of study is psychology and architecture as well as cultural and social. Among made research about relation of dynamic forces of form in architecture with man psyche can mention to tentative Studies of Alan Isaac (1971) and Rudolf Arnheim (1949, 1965, 1977). The best Persuasive of gestalt resolution of architecture expository container is Rudolf Arnheim's resolution. This resolution is sited the in zone of tendency form provisions of recognizing pulchritude concepts. Arnheim utilize tentative research in expository and logic analysis for deduction of recognizing pulchritude experience. With survey of studies, observe that research in discussion of form psychology is made glancing and recognizing pulchritude of form is pended to visionary philosophers and research of small team of psychologists. In addition, statistic society of their research is healthy persons and Wealth studies do not about patient (with psyche ailment). Whereas this corps of persons has needed to outside rather of other persons. The way of research is descriptive- interpretive and the way of information collection is attributive and purview. The statistic society is the buildings of didactic-remedial (conference and psychotherapy) in Karaj and their Patient with psyche ailment .it is typified the chanceful. The sample corps is ten buildings of didactic- remedial (conference and psychotherapy) in Karaj and their hundred Patients and Observation, questionnaire, conversation, information bank and computer network are tools of information collection.

2. PSYCHE

In the Quran about human psychology and how donate the enormous power and science to human is expresses in many verses, including:

Moreover, I swear by the soul of man and who ordered it. Then the ugliness and evil (bad and good) t inspired him. It is the salvation if cleans its souls and everyone infected himself by sin, he becomes desperate and deprived. (Sureh Shams, verses 7- 10)

Read in the name of your god who he created. He created man from a clot. Sing to the Bountiful god. As someone who taught by the pen. Moreover, he guided to human what people do not know. (Sureh alagh ,verses 1-5)

Hey man, what makes you proud to the holy god? The same God who created you and the organized, and balanced, and regular construction. Moreover, be combined you in any way want. (Sureh enfetar ,verses 6, 7, 8)

3. MENTAL DISEASES

The fear and sorrow influence on human psyche very much. They are the source of mental illness. For this reason, in many verses of the Quran to get rid of these two factors has emphasized:

Moreover, we don't send down the messengers but the bearer of good tidings and warner, those who believe and kindness, on they will not grieve and fear. (48) Chapter 6: Alanam - part 7

O Children of Adam when messengers of your own come to you and they read my verses, then whoever tended righteousness thus will not fear and grieve them. (35) Chapter -7: Alaraf

On friends of God are not fears and grieve (62) Chapter 10: Yonus

The human can safe from invade of variety of mental illnesses such as anxiety, depression and personality disorders and substance dependence and addiction and bipolar impaired.... (Now have a very comprehensive escape) with of with virtues and trust in the Creator.

Fear and anxiety cause worldly greed and avarice, and man is always trying to make sure support, Because he is forgotten the mainstay support innuendo god, and he is out of devotion. Thus, he is immersed permanent in the fear and doubt. Moreover, did not see her drink.

4. SOLACE

The definition of solace sense in three grounds, corporeal, psychic and religious is consisted of naught pressures of Man's power out on quintet attention in corporeal ground, naught pressures of mental in psychic ground, and the relation sense with god in religious ground. (Naghi zadeh, 1385, p71) The pressure that upset person or system, it has maintenance status of naught equilibrium or disquiet. These pressures does not create by exterior powers only, rather they are created the by rebuttal of out powers and internal powers. (Simon.J Enrit, Teror.J.Powel, 1378, p4)

5. VIVACITY

John Gehl defined Vivacity:" all man works that with to compliance of her needs ". (John Gehl, 1987, p1-10) Relish and ardor or vivacity is a heart sense. Expand power with dependent data. It is so strong that can Negate destroyer data. (Fabio Marchesi, 1383, p214)

6. THE PSYCHOLOGY OF DYNAMIC FORCES OF FORM

The human is a dynamic creature that hi struggles individual and social for self-survival. He should get the aim for success in his around environment, hi should measures and guides sudden changes in the interest of environment for his compliance with nature, and adapt his findings to other people in order to strengthen both activities. Visible images are essential tools for the growing monitoring on nature. The new visual conquest creates a new horizon, a new reference standard, and finally a new departure point for further growth. (Gyorgy, kepes, 1368, p. 59)The visual element is fully dynamic campaign. The dynamic characteristics are inherent in all things that our eyes can see; they play a fundamental role that we can say: the visual perception purports the visual experience. Henri Bergson says, "More of this is that form is the planning of movement for us." (Rudolf Arnheim, 1388, p.518) cannot be ignored the created power, speed and direction of movement in upon any classified space. So the created tension is used as the visual expression of movement. (Gyorgy, kepes, 1368, p. 174) The Movements of material rock the eye muscles of audience and make the nervous satisfaction. The line or surface suggests the degree of dominance that it has been impressive on their creation: Can show the mental courage of confidence and skill, orb hesitant and clumsy. Thus lines or surfaces have kinetic instinctive that it is independent of what they represent, and independent of their visual relations on the surface. (Gyorgy kepes, 1368, p. 177)It should express that Conceptual forces being real in both areas - the realm of the psychological and physical. (Rudolf Arnheim, 1388, p. 24) this elasticity's have a departure point, aim and severity as conditions which physicists have considered defining the physical forces. For this reason, psychologists speak of psychological forces; however, have a handful of them, such as Rudolf Arnheim used on the perception of the term. (Rudolf Arnheim, 1388, p. 25)

Visual experience is a dynamic experience. What person or animal sees, it does not only the combination of objects, colors, shapes, sizes and movement, but, in the first degree, it is the interaction tensions between of tensions of towards each other? These tensions are not something that the viewer according to self desire to add static images, but also the size, shape, placement, or The color is one of the idiosyncrasies of the conceptual findings. Since these tensions have power and direction, we can include them the psychological forces. (Rudolf Arnheim, 1388, p. 18)

Magnetic steel rod is more than physical alone: the electric field is an integral part of it as much as its body shape and weight. The space of image be the world of the living, not only because of its space forces-move up, down, turn-but also because the field is activated between of the move and the next move. Real spectacular and distinctive elements are the focal points of the field: these elements are concentrated energy, the colors, values, structures, points, lines, and spaces produce varying quantities of energy and thus each element or quality can limit Part of the image. The fields spread in every direction and every field has a certain way. Energy fields can interrupted and take the aim periodically: the field that stops another field, or draws, it pushes, or gives power, or it interferes. The dynamic

relationship between a field with another field cause accelerations and tensions. The Fields of away from forces and space energies focus in angle of reflection. (Gyorgy kepes, 1368, p. 25)



Figure 1. Fields of the visual elements
Reference: (Gyorgy kepes, 1368, p. 28)



Figure 2. Fields of the visual elements
Reference: (Gyorgy kepes, 1368, p. 29)

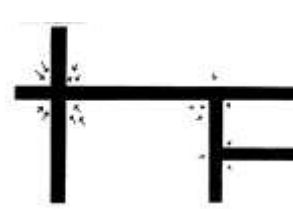


Figure 3. Magnetic field.
Reference: (Gyorgy kepes, 1368, p. 28)

Art designer should be aware of the pressures and forces that represent linear systems. (Graham Kalier, 1386, p.150)The distribution of space should examine in scrutiny of space and architectural forms. In addition, study the aim of forces and relationship between of operator forces in limited space and dominant force. Drawings may be from type of balanced tension or analyzed tension.

Two features of visual elements trace in balance or equilibrium particular: the weight and the visual direction (Rudolf Arnheim, 1388, p. 32) Resultant of dynamic forces May be any balanced tension or analyzed tension. The balanced forces create stability, such as Amines Gothic cathedral and the forces that are in conflict and create unstable elasticity, like the Diweiss Baroque church building. In making of designs be used by a moving of force. (Graham Kalier, 1386, p.144)Any change so relocation of spatial data that represents the spatial relationships, such as size, shape, direction, distance, brightness, brightness, color, induces the motion. If retinal image any of these symptoms be adhered to always of ordered change, such as widespread or systematic compression, progress or regress, we get aggressive or regressive move, expansion or contraction.

We get vertical or horizontal movement, if the distances of between the marks are become added or disappears. (Gyorgy kepes, 1368, p.158) Goethe says, ((a certain color enters a certain impulse on eye and organs perceive to fight.)) dynamic Tendency engenders for the reconstruct of the initial order, perfect sensitivity and physiological balance. (Gyorgy kepes, 1368, p.33)

6.1. Dynamic forces of form and sense of calm

In the design that designer wants to represent implicitly, he chooses the fine distinction for expressing and abstinences of took up too much power and clarity to express of message. Implicit attitude and calm in design should be along the nicely visual impacts and very tender. Its opposite is without blinds and load that designer uses it the visual elements with confidence and arrogance in a way that we see intensity and Energy to clearest way. (Donis,A.Dandys, 1368,p. 166) In addition to low and quiet power the factors such as regular repeating or regular alternation of similarities or similar of light gives balance and calm to visual organization. In recognition of this order to we learn that when the visual reactivation would be and what regeneration of the nerve - muscle of personal to be necessary for perception of the next unit. (Gyorgy kepes, 1368, p. 49) For example, traditional woven of Peruvian population was created because of the weight of inherent in the dynamic process of visual organization. The exact frequency of lines, forms and colors was transferred weight of date into space. In addition, they dealt with the image of harmonious ordering in a neutral and stop manner for large periods. (Gyorgy kepes, 1368, p. 50)

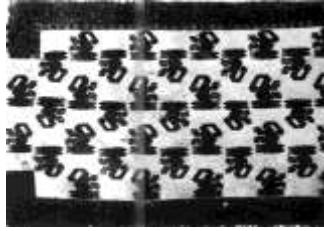


Figure 4. Large red and white fabrics, Peninsula Parkas, Peru, **Reference:** (Gyorgy kepes, 1368, p. 51).

In addition to the above factors should add that if the forces and fields that they produce the nature of light and the forces of space have the same, we found the balance that non-tension that will be static, calm and quiet. For instance, the central organization such as sphere and cubes makes the balance of forces. The central forms are to expression Stability and tranquility; (Maurice Desaosmares, 1964, p.22) the following results obtained in the survey on the impact of dynamic forces on a sense of relief in patients with mental problems (Figure5):

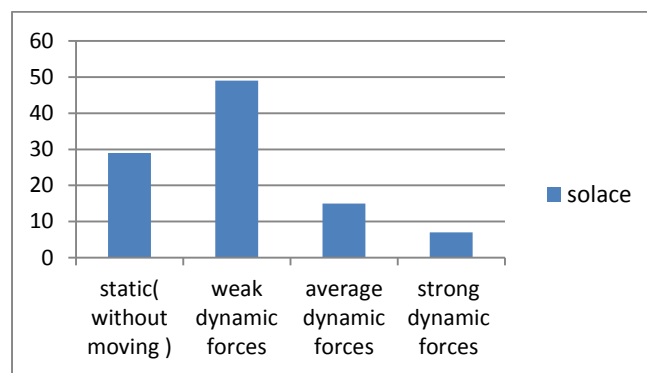


Figure 5. Chart's measure of the impact of dynamic forces of form on Creating of calm sense in patients with mental problem.

Reference: author

As we can see, the forces with low dynamic create a sense of relief in majority of patients and then the static form (form that their forces are to interact and live) has the greatest impact for to make peace on patients. As a result, the first hypothesis is correct and the form of static and forms with weak dynamic forces (weak flow) are affected on feeling the comfort of patients.

6.2. Dynamic forces of form and sense of vitality

The human to organize of relations makes the ways of perception that he can be closer to world of without rest by passing of them. Sake to find of conceptual perception ways, he relies on number of factors. (Gyorgy kepes, 1368, p.157) Similarly, the self-crisis of psychological space organizes with to shape of his wishes in the visible images and temporary equilibriums in eternal challenges beyond of his desires and realities creates concerns and social taboos. In addition, replaced the old fixed point of view, for response of needs raises moving point of view, and instead a static order, dynamic weight. (Gyorgy kepes, 1368, p.179) A static two-dimensional level is sedentary experience. Even a little moving catches the attending more than richest relatively of things are static relatively. The basis of all life processes is internal contradiction. (Gyorgy kepes, 1368, p. 35) Restrictions of our nervous system determine, not only the number and wide visual units that can be understood as a whole, namely not only the limitations of space rather also the limits of active visual experience. We cannot look static relationship to Long time and we do not unhand our interest. The image as live Experience cannot be in the frozen structure for a long time. For the view be lively organism, it is needful that their internal relations change constantly. To eye and mind must feed with dynamic visual relations. Only this variety of sources can provided necessary cause for focus of attention on the image. Change creates mobility. Thus the visual image must be departed in the character of time. (Gyorgy kepes, 1368, p. 49)

The nature of vitality an image achieves from between Tensions of the space forces, innuendo from battling for the absorption and excretion of the forces of the fields. Experience of space is level the basis of the potential move of the variant visual units on surface of the image. If the forces and fields that they produce, the natures of light and same Special Forces have, we will reach a balance, but without the stress, will be static. However, if it gave the mobility to forces and their energy fields, you can use these fields in bilateral contrast, so that they balance on fact of the image. Moreover, in this balancing, the line or figure with specific color and position will make a field that will come to foreshore to the audience, and other unit will make a field that will come back from the audience. The other will enable the field that desires to high level and that one down. These movements can be different in size and quality of the eye pass over. Innuendos have different row, weight, and concentration. However, if the fields of space forces were equal on the surface of the image achieves a dynamic equilibrium. (Gyorgy Kepes, 1968, p. 35) the various age's painters were familiar with this fact and they research creatively about movement with Exposition of vitality of the visual unit that it is moving with support of sharp play of Intense contrasts of shadow, bright, and vibrant colors. However, object seem the moving with Positioning of objects on surface of the picture, the kind that it be conflicted with center of gravity and main trend - horizontal or vertical - of space. Whatever consecutive and concurrent contradictions are greater, as well as the spatial movement in relation with the surface of image is more. (Gyorgy Kepes, 1968, p. 160) Dynamic of equilibrium depends on the nature of conflicting forces that finds balance. Also depends on visual concept and severity of exposure of forces. In order to obtain the maximum dynamic balance, the image made from main antonyms, roles of rectangular, horizontal and vertical straight lines, pure blue colors, red and yellow. (Gyorgy Kepes, 1968, p. 107) I have chosen the descriptive section of James Ackermann from library Larntyn by Michelangelo: the integrity of the wall sustains the shocking effect of the stairs. These stairs enter as uninvited stranger to porch. However, dramatic and formal coordination exists between of the stairs and the walls, because they conspire and attacks to peace of viewer. Wall panels that grow the front of columns, likely against of the pressure on the outside stairs enter the within pressure on closed space. (Rudolf Arnheim, 1966, p. 295)

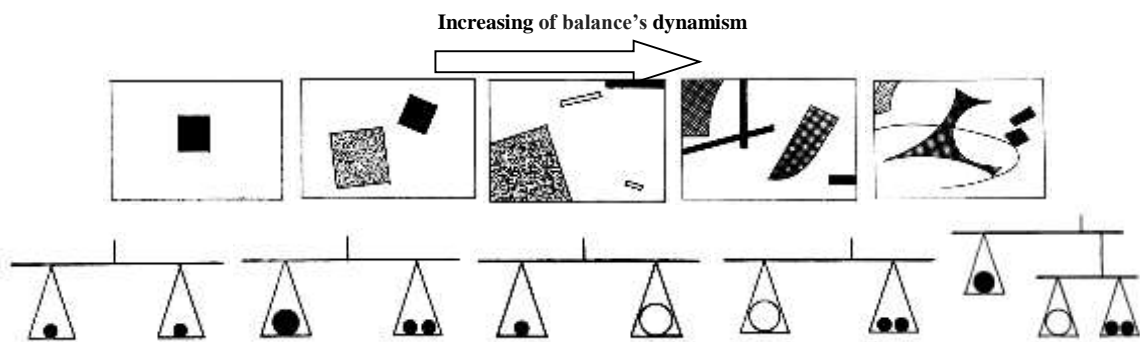


Figure 6. The concepts of static and dynamic balance, Reference : (John Lang, 1388, p. 221).

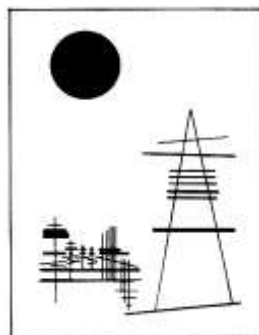


Figure 7. V. Kandinsky, thin lines balances to heavy black dot, Reference: (Gyorgy Kepes, 1368, p. 38).

The following results obtained in survey about the impact of dynamic forces of form on creating of sense of freshness and vitality in patients with mental problems (Figure8):

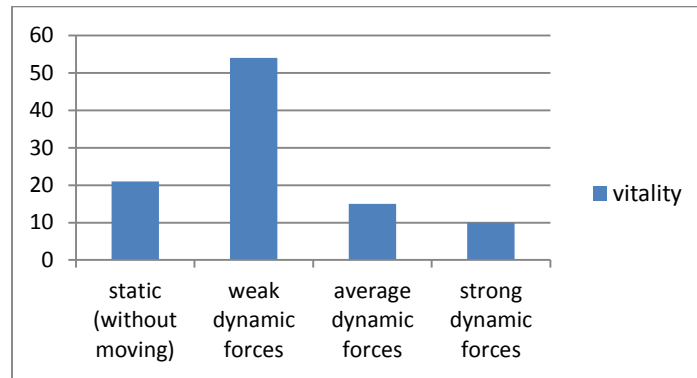


Figure 8. Chart of the impact's measure of dynamic forces of form on creating of vitality sense , In patients with mental problems.

Reference: author

As can be seen the forms with low dynamic forces creates the freshness and vitality sense in majority of patients, and then static forms(forms that forces them to interact and live) create vitality in people and medium and strong dynamic forces creates this feeling to lesser extent in people. As a result, the second hypothesis is incorrect, because according to this theory, the average dynamic forces are causing of the sense of vitality in patients. As a result, the forms with weak dynamic forces (weak flow) create the sense of vitality in patients.

6.3. Dynamic forces of form and sense of fear and sorrow

The process of Visual perception is the work of the eye. Image organizing that means evaluation and creating of communication between visual different of light and dark relationships, value, saturation, texture, position, shape, direction, distance is via the neuromuscular activity of the eye.

Energy and intense activity or activities of the split increases consumption of nervous energy. The eye requires to rest as activity in his work. Should purpose the balance of complementary factors, otherwise the loss of energy due error in measurement leads to stress and fatigue. (Gyorgy kepes, 1368, p. 49) Just as that each force can only show herself through of resistance against opposite forces, also space forces are received only when collide with opposing spatial forces. But random display of space forces, point, line and surface opens the zone that forces stamp accidentally , and they are unable to make a balanced set that its inside be two equal forces and with different side. As a result, the image will be empty, and the two-dimensional field of reversional system will not be that we able to assess of special movement by its basis of and we do not achieve to vitality space. (Gyorgy kepes, 1368, p. 35)The human cannot tolerate the chaos in psychological space, as he is not able to withstand of turmoil in the light acceleration of geographical space. The human organizes the crisis of light with shaping to full meaning spatial sets. (Gyorgy kepes, 1368, p. 179)

Strong forces create the movement and emphasizing on polar and neutral forces and static causes of stress and tension. (Graham Kalier, 1386, 164) Volflin states: we stimulate our muscles with to see of forces of strong load-bearing columns so that we are load-bearing columns the same, stronger pillars creates in our full energetic nerve stimulations. (Rudolf Arnheim, 1386, p.83)The test of Jean-bini is done that this test is asked individually from members of a college dance that they perform the improvise programs on based the stuff of such as sadness, strength, or gradient.

Dancers' performance reflects the high level of alignment. For example, movements were usually slow in representation of the theme of grief and they were situating in limited scope. These movements were often curved panel and were depicted the something stress. The vector of movements was non-explicit, variable, and fluctuated, and it seemed that the body rather than was behaved on self-initiative, submits

to forces passively. It must say that the mental state of sadness follows the same pattern. Mental processes have slow movement in a depression.

Moreover, be drawn rarely the beyond of issues that are related with immediate typically Experienced and transient interests. His entire thoughts and efforts represent amenity and lack of energy. He shows his narrow dogmatism, and external forces usually control his activities. (Rudolf Arnheim, 1388, p567-566)The following result obtained in the survey about the impact of dynamic forces on creating of the sense of fear and distress in patients with mental problems (Figure9):

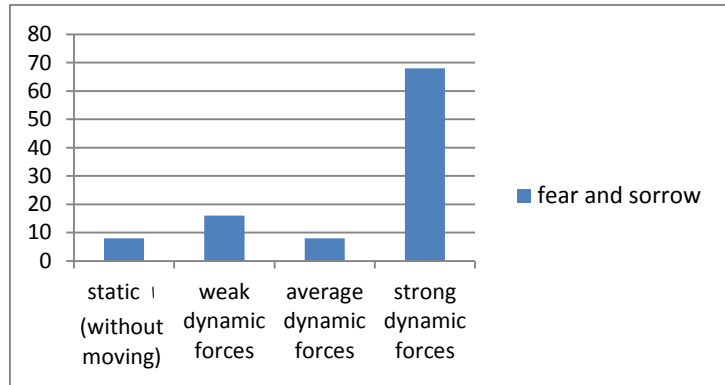


Figure 9. Graph of the effect's measure of dynamic forces of form on creating of Fear and distress sense in patients with mental problems, **Reference:** author

As can see the forms with high dynamic forces are causing a sense of fear and sorrow in majority of patients. Moreover, static forms (the inter action forces) and forms with low and medium dynamic forces create very few feeling in patients. As a result, the third hypothesis is correct, because according to this theory, the strong dynamic forces create sense of fear and sorrow in patients.

By examining of charts of dynamic forces, we can draw the following general diagram (Figure10):

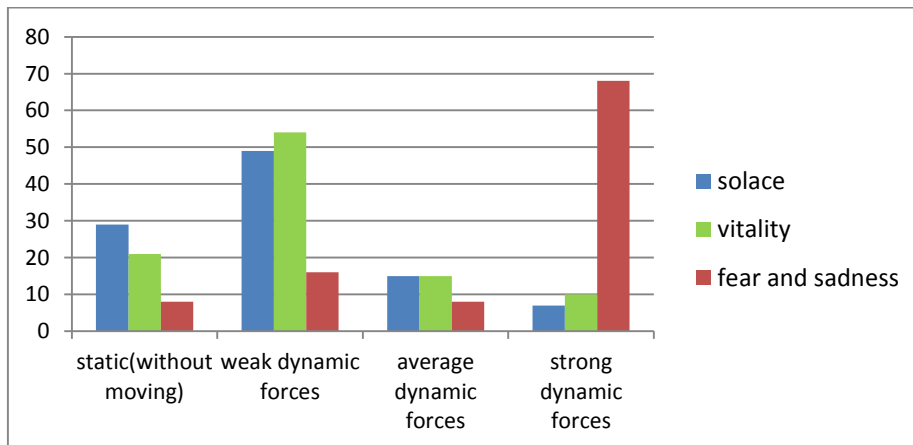


Figure 10. Chart of the influencing measure of dynamic forces of form on creating of the different feelings of psychological in patients with mental distress, **Reference:** author

7. CONCLUSION

Dynamic forces of form create the psychological feelings of relaxation, vitality and fear and sadness in people (with mental illness).The Survey's results of patients and studies of documents suggest that static forms and forms with weak dynamic forces (with poor fluidity) create the tranquility sense in patients. And forms with poor dynamic forces (with poor fluidity) create the

Sense of vitality in patients and forms with strong dynamic forces create the sense of fear and sadness in patients (with mental illness).

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