Effect of the Aesthetics Dimensions on Tendency of Women to Recreational and Sport Space in Mazandaran Province’s Parks

Somayeh Bahramnezhad, Ali Mohammad Safania, Seyyed Jafar Moosavi

1Department of sport management, Sari Branch, Islamic Azad University, Sari, Iran.
2Department of sport management, Science and Research Branch, Islamic Azad University, Tehran, Iran.
3Department of physical Education, Qaemshahr Branch, Islamic Azad University, Qaemshahr, Iran.

ARTICLE INFO
Article history:
Received 18 October 2014
Received in revised form 31 December 2014
Accepted 18 January 2015
Available online 1 March 2015

Keywords:
aesthetics, light and color, sport facilities, park

ABSTRACT
The present study was conducted to investigate the effect of aesthetics dimensions on women tendency to sport-recreational spaces in the parks of Mazandaran province. A descriptive survey methodology was used in this study. Statistical population includes all above 18-year old females in Mazandaran who used to spend time in parks. Using Cochran formula, a sample of 384 people was adopted. Data were collected by library studies and an author-synthesized questionnaire including 26 items and Likert 5 point scale. Validity of the questionnaire was confirmed by professors and experts, and its reliability was calculated by Cronbach’s alpha as α=0.78. Data analysis was performed using both descriptive and inferential statistics such as chi square and kruskal-wallis tests. Results indicated that all dimensions of aesthetics (light and color, congruence, form and shape, environment and space) had influence on females' tendency to physical activities; the highest influence was observed for lighting and color and the lowest effect was seen for congruence.

INTRODUCTION

As an indispensable necessity and a fundamental requirement for all societies, sport has gained considerable public attention during recent years. It has been reported that sport goals vary among various cultures; and according the relation between these two factors, sport is introduces as a part of culture [11]. Disequilibrium in sport accessing opportunities has been well documented in female participation studies. Since late 19th century up to now, women position in athletic activities, even under equilibrium of other conditions, has been lower than that of males. Women access to sport is not improved in a linear manner, and the involvement of females in athletic activities is determined by the relation between the two genders in a certain period of time and in a given society [23]. Improvement in each society depends on its people and social fall is also determined by every persons living in that society [29].

Considering importance of sport on female health and reduced tendency of women to physical activity [21], the present study aimed at investigating one of tendency factors among the women. It has been reported that dimensions of aesthetics in sport centers architecture can be effective in attracting people to the environment and motivating them to physical activity [27].

The Greek word “Aisthetikos” refers to sensational perception and the word “Aistheta” covers sensational perception cases [2]. Therefore, aesthetics is a Greek word which means perception and recognition. In his book “aesthetics”, Baumgarten defined aesthetics as tangible awareness science [6], as if aesthetics appears as the first step in recognition of the world and a moment of scientific identification. In “an introduction to aesthetics”, Hegel argues that aesthetics is not suitable world and the word “Calistic” is not sufficient and since Vul'fera (1754–1679), aesthetics had been regarded as a philosophical discussion [17]. Aesthetics deals with investigating the methods of environment perception and one’s position through this perception. In “systemic approach”, beauty is expressed in juxtaposition with perception and the observer is regarded as a part of this set. Aristotle expressed art with the word “Catarsis” meaning refinement and cleanliness and in his book “poetics”, regarded
by Omberto Eko and Tezotan Todurov as the first structural analysis of literature texts, he argued that beauty means possessing certain size and order.

In “fulike philosophical language”, aesthetics is introduced as a positive knowledge whose subject is artistic beauty and is equal to art philosophy [3]. Beauty is an expression of phenomenon which, after perception by sense and transfer to thinking center of the observer, can motivate the responses that are based on collected experiences [22]. Aesthetics in general refers to evaluation of environment sensing and the position of person within that environment and its subject is perception of beauty; so it is necessary to pay attention to beauty concept [5]. The rise of the Pythagorean School can be regarded as the start point of a sophisticated and regular theory of aesthetics, but the fundamental concepts of this concept were initiated by Plato (427-347 BC). In Plato thought, aesthetics is interpreted under the light of philosophy which considers the world as a fact; as if the artist doesn’t create; rather he limits himself to imitating that superior fact [5]. Aristotle (384-322 BC) left the old metaphysic objective approach and necessity for the linkage between aesthetics and imitation and Plotinus (205-270) extends the Platonic metaphysical aesthetic trends [5]. Emergence of aesthetic psychoanalysis can be seen in the sensational perception theory developed by “Gufrid van Libenits” (1646-1716), but the exact definition of aesthetics was proposed by Alexander Baumgarten who expressed that the goal of aesthetics is “knowledge evolution” and “sensing perception”. At the end of Descartes individualism and emergence of empiricism, since biken to hume, intellectual properties of sensory perception were more accentuated [5]. According to Kant, artistic beauty is related to sensory perception and enjoyment. In the book ‘assessing judgment power’, he investigated virtue judgment from quantity and relation perspective and along with objection with absolute sense orientation of Hume and Huchenson, he argued that beauty is a purposeful form in an object as long as it doesn’t express any goal in that object [2].

At the early medieval era, Plato notions were more prominent. The church, in accordance with Plato, considered the art an imitative and worthless image formed to create hallucination and lying. A little after, art, which has been called devil tool before, became church servant. Aesthetics was proposed scientifically and philosophically which is established by reactions of a philosophical system and was founded based on determining fundamental moments of dialectic continuum and destroyed all bases of empiricism [5]. Kant believed in finality without defined aesthetics as a form of finality as long as it is perceived independent from proposing a goal or final [24].

Investigation of aesthetics dimensions:

1. Environment:

Environment is a place or a part of space gaining identity via factors contained in it; space can be moved but environment can’t. Everything put in place requires space. A reciprocal relation and reaction among three factors (human behavior, concepts and physical properties) creates an environment [7]. Environment is an hierarchy in which, the individual is considered to be in its center and is surrounded by behavioral environment, perception environment, practical environment and geographical environment [18]. Environment and architecture are not in opposite direction; rather they are integrated and complement each other. Every architectural work is only perceivable in relation with its surrounding environment and so, environment has influence on this perception [19]. If in a sport environment, plants and natural elements such as water, trees and flowers are used for creating the landscape, they not only endow an identity to the space, but also provide more tranquility and enjoyment for the users [10].

2-Space:

Space is the outcome of a thoughtful process resulting from human interfering with the environment. The main topic in this regard is the alignment between human and space which should be balanced, lasting and complete. Architecture space, before relating to physical structure of the architecture, is related to human perception and his relation with architecture [19]. Kenzo Tange is an expert of architecture and civil engineering who considers the city as a live organism whose development is based on its structure growth. According to Tange, space is a field for human physical activities and also an area for relationship establishment in symbolic methods. However, the most important aspect of space is creation of a field for forming the human [16]. Amos Rapoport believes that civil space includes a set of relationships [26]. According to Castelles, space is not a reflection of society; rather it is material dimension of the society and if it is regarded separated from the society and social relations, it resembles the situation of separating the identity from its body and then, the first principle of every social science is ignored. Spirit and body are in a mutual relationship. Therefore, special forms of our planet are formed by human activities as is the case for other things [8].

Environment plays important role in perception of architecture. Civil architecture not only is connected to the environment in real world, but is in the same situation in our dream world. Therefore, the role of environment in perception of architecture and its related spaces is indispensable [19]. Spatial identity is a component of human individual identity which is resulted from his general awareness about the physical word
in which human lives. The importance of the balanced relation between personal spatial identity and properties of external environment has been emphasized by Prochansky as well [6].

3. Form or forma:

Gestalt (configuration) and form are closely related to each other. Both are based on the Greek work Forma. Gestalt or configuration means the observable whole, restricted by surrounding barriers, more or less composite and possessing a total unity in appearance of something [19]. In designing process, considering general properties of the building and form aesthetics is necessary for achieving a suitable architectural work. The antecedent of this is familiarity with architectural designing nature and planning to achieve it.

4. Harmony:

Harmony is a concept widely used in natural and logical sciences. In aesthetics context, harmony refers to an order existing among the components of a certain phenomenon [19]. A clear example of harmony is that existing between environment and human needs and instinct. Various elements of space and architecture form such as walls, ceiling, doors and windows, furniture and home facilities with different sizes, forms and colors are placed near each other. These diverse elements should be organized in a balanced visual composition and the weight and visual forces created by the elements should achieve a balance and tranquility. Weight of visual elements and their attraction rate are determined by size, form, color, orientation and the place of abovementioned elements. Imbalance is against balance; visual imbalance is agitating and disturbing and can produce insecurity feeling in the context of architecture and large volumes [31].

5. Light:

Light is the first prerequisite for each visual perception. Under absolute darkness, none of space, form and color can be seen. However, light is not merely a physical necessity; rather its psychological value is an important factor in all aspects of human life [19]. Light is a component of life nature and in many cultures, light or sun- as a light source- is regarded as a divine element and therefore, is highly valued [19]. Light is the first phenomenon of the world which visualizes the live nature of the world via colors [30] and is an important element in internal designing. Natural and synthetic lights generate different effects in the environment [12].

6. Color:

If color perception is considered as a sub-component of visual sense, this is due to lack of awareness about importance of color perception. Color recognition and light intensity are the most factors in human visual perception [19]. Characterizing an art work is suitable when it can attract people attention by its color [12]. Colors provide the space with depth and even can create the space. Color can make the building tangible and even reflect its function. When proposing a color design for a building, the relation between the building and its surrounding environment should be considered and the performance of building in the city and urban area should be determined. Color can help in creation of unity, identity, continuity and order [30]. Creation of female-specific sport buildings and proposing female-specific training programs can enhance their body condition and health. In the case of occurrence of short of breath, headache, muscle weakness, nausea, fatigue, chest pain, back pain, pelvic pain, difficulty in walking, decreased fetal activity and successive contractions of the uterus, sport and physical activity should be stopped and diving in water, climbing the high place with low oxygen and swimming in very hot or cold water should be avoided. In the case of continuous bleeding, embryo abortion experience and high blood pressure, the athletic activity should be completely avoided. Thus, it is of great importance that women be concerned with their own and also their children health. As mentioned before, it is well documented that sport can guarantee women health and so, some strategies should be applied to enhance their tendency to sport and athletic activities. Regarding mental properties of females and their attention to aesthetics, aesthetics issues should be considered in designing sport places and facilities for women. In this regard, some investigations have been carried out within and outside Iran.

Razavi et al [27] investigated influence of aesthetic dimensions on customers’ tendency to sport centers in Mazandaran province. Results showed that color, light, harmony, form, space and environment have influence on customers’ tendency to sport centers. Moreover, there was significant difference between current and ideal status of sport centers regarding aesthetics. Results of factor analysis indicated that color, space, form, harmony, light and environment had the highest importance for people, respectively.

Ghasemian et al [15] studied architecture of school sport spaces and students’ tendency to physical activity. The investigation was conducted on 400 students (189 female, and 211 male) in ten high schools of Sari. Results indicated that architectural elements of education place should be considered for retaining health, sanitary and mental security of students even if they have no effect on educational improvement.

Ramezani et al [25] investigated motivation of public sport participants in outdoor spaces in eight public sport stations involving 3000 people. Results showed that according to the participants, achieving health and fitness has the highest priority, followed by improvement of life and job relations, prevention from and
treatments of disease and social interaction. In all motivations, females had better score compared to males and married persons only have more personal reasons for participation in these activities. Mahmoudi (2005) studied effect of color on people calm feeling and found out that in today cities, color and its influence on individuals is not highly considered. Based on an organized systemic thought, application of this factor in modern cities together with a scientific sophisticated planning, much more tranquility and calm feeling and mental concentration can be achieved. Indeed, color is the most effective factor in changing boring spaces to desirable and fresh ones. Ehsani and shamsi [14] investigated customer absorption approaches of female body building centers in an investigation entitled “evaluation of comments of customers of female-special body building centers in Isfahan”. One of the investigated factors was club location and internal design (architecture) and the authors found out that club location and its internal space design has high influence on customer attraction. Abd-Latif et al [1] investigated penetration of physical activity in leisure times among adolescents (913 people) in the range of 13-17 years in four regions of Malaysia. The investigation showed that physical environment is crucial for enhancing youth involvement rate in total activities during leisure time. Therefore, these activities constitute the largest part of the youth’s time and it is desirable that places be creative, comfort, safe and friendly. Cauwenberg et al [9] studied the relationship between physical environment and physical activity of adults in an organized review. The aim of this study was to propose a comprehensive review on the books relating to the relationship with physical environment in adult people. Reviewing the organized books revealed 31 papers. The results were not compatible; however physical activity (PA) was the most neglected environmental property. Most of studies concerning transient environments need application of authenticated, acceptable, standard and longitudinal designs and evaluation of intermediate factors. McCormack [20] investigated the relationship between civil parks properties and park usage and physical activities performed in them. The author found out that there is relationship between aesthetics (beauty and attraction) of environment and individuals’ tendency. Aesthetic is important for adults as is the case for children, adolescents and youth. Ugliness and unfavorable appearance discourage people for people participation in these places. Positive properties that can be effective in enhancement of parks’ beauty and people tendency to sport include presence of trees and shrubs, garden, lawn, flowers, natural environments and water landscapes. These spaces are important for aesthetics. In fact, presence of nature and environmental calm can be attractive for persons to encourage them to participate in athletic activities.

Santos et al [28] investigated perception of synthesized environments by Portuguese adolescents in relation to physical activity and found out that there is important relation between female physical activity and accessibility of free or cheap recreational facilities in vicinity, suggesting that presence of active people in neighbor regions is accompanied by higher physical activity. Some aspects of neighbor environment are related to participation in male physical activity compared to females. Investigating social-mental and environmental factors relating to physical activity in Queensland region residents, Duncan and Mummery [13] reported that tendency to physical activity is influenced by environmental properties. It seems that aesthetics has enormous effects on physical activity and enhances people participation in athletic activities such as walking. The present study was conducted to investigate the effect of aesthetics dimensions on women tendency to sport-recreational spaces in parks of Mazandaran province and thus, encourage the citizens to participate in physical activities.

**Methodology:**

The methodology of this study was a descriptive survey. Statistical population includes all above 18-year old women of Mazandaran who use the parks whose number for investigation was not determined. Regarding population size (indefinite population), 384 people were selected by Cochran formula using cluster sampling method as the sample; so that the province was divided in to three western, central and eastern part, in each part to states were adopted and in each state, two neighbor parks were randomly selected. The questionnaire was distributed among the visiting women, and after a brief description, the questionnaires were filled and data were collected. A large volume of library resources including books, magazines, journals and scientific websites were used for literature review. The questionnaire including 26 items and Likert five point scale was synthesized by the author and its validity was approved by seven professors and experts of public sport. To estimate reliability of the questionnaire, by a primary plan 30 questionnaires were submitted to respondents an after completing, data were analyzed using SPSS software and its reliability was calculated by Cronbach’s alpha as α=0.78.

Data were analyzed by descriptive (mean frequency distribution, standard deviation and mean deviation error) and inferential (chi square and Kruskal-wallis tests) statistics.

**Results:**

Descriptive statistics regarding aesthetics dimensions are presented in table 1. As can be seen, the highest response frequency mean belong to light and color (mean= 4.32) and the lowest one is related to congruence.

<table>
<thead>
<tr>
<th>Sub-criteria</th>
<th>Response mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light and color</td>
<td>4.321</td>
<td>0.44</td>
</tr>
<tr>
<td>Congruence</td>
<td>3.44</td>
<td>0.83</td>
</tr>
</tbody>
</table>
As can be seen from table 2, the dimensions of aesthetics including light and color, congruence, form and shape, environment and space have influence on female tendency to sport and recreational spaces of parks (p<0.001).

Regarding the influence of all the dimensions, their effect rate and prioritization were investigated.

Data presented in table 3 show that p=0.000 is lower than standard error (α=0.05), showing that the effects of various aesthetics dimensions on women tendency to physical activity are different. Mean rates were determined by Kruskal-Wallis test:

Data presented in table 4 show that light and color of parks and sport places have the highest influence on women tendency to physical activity; whereas congruence had the lowest influence. Regarding the fact that parks don’t have primary facilities, these findings can be judged. Estimation of aesthetic influence on female tendency to physical activities is presented in graph 1.

**Graph 1:** Estimation of aesthetic influence on female tendency to physical activities.

**Discussion and conclusion:**

Results indicated that light and color dimension is effective in enhancing female tendency to participate in sport recreational spaces in the parks. It can be inferred that light and color is an important factor in attracting people to the parks for physical activities because proper lighting and application of suitable colors can generate positive vision among the people and make them eager to stay in a certain place. Moreover, some colors activate the body and motivate the person and thus, the person gets eager to make physical activity in a given area. This...
result is in accordance with those reported by Razavi et al [27], Shafiei [30] Mahmoudi (2005), and Kaspiri et al (2006).

Based on the results, congruence dimension has influence on women tendency to sport recreational spaces in the parks. It can be inferred that the way of placing things in such a way that generates internal congruence can encourage people for physical activities. Placing mode of sport devices so that they can be accessible for public and the place of female sport that provides them with a place for make athletic activity with comfort, and also proper arrangement of park benches and appropriate place of tress and pool and in general, coordination of the components can make people eager to the generated spatial situation and by this eagerness, the people like to spend more time for remaining at that place and make various activities including physical activity. This is in agreement with the results reported by Razavi et al [27], Shafiei [30] and Kownenberg et al [19].

Form and configuration dimension has influence on women tendency to sport recreational spaces in the parks. It can be inferred that if the form of parks makes people eager to these places, then it can enhance their tendency to physical activities. Identifying form and mode of things and their components in a place indicate thought level and awareness of the designer about dominant cultural and thought status of the society. Thus, identification of dominant public thought and their internal requirements for determining the form of a certain place is a requirement that can enhance the number of persons who are eager to that place and this is in agreement with the results reported by Razavi et al [27], Ehsani and Shamsi [14] and Abdollatif et al [1].

Our finding showed that environment dimension has influence on female tendency to sport recreational spaces in parks. It can be concluded that according to broad definition of environment, aesthetics, tranquility and collaboration, a friendly environment can provide mental health and people encouragement to physical activities because people are naturally eager to calm and friendly spaces and attracted by them. Moreover, environment beauty motivates the person and encourages him for activity. This is in accordance with the results reported by Razavi et al [27], Ehsani and Shamsi [14] and Abdollatif et al [1], Kownenberg et al (2011), Rodriguez et al (2012), McCormack [20], Santos et al (2009), Duncan and Mameri [13] and Kuka et al (2003).

Space dimension has influence on female tendency to sport recreational spaces in parks. It can be inferred that proper spacing in parks especially for physical activity can encourage individuals for physical activities. On the other hand, when parks have improper, small and crowded spaces, people tendency for sport is reduced. This is due to mental aspect that people don’t like to act in irregular spaces. Moreover, from cultural and social perspective, physical activity in small activities makes the person be more conspicuous and this situation is harder for women who are not eager to this status. Thus, suitable space can enhance people tendency to physical activity and this is in agreement with the results obtained by Razavi et al [27], Ghasemian et al [15], Shafiei [30], Ramezani et al [25], Rahnamayi et al (2009), Taherpour Kalantari (2007), Mahmoudi (2005), Ehsani and Shamsi [14] but is in contrast to the results reported by Ghasemian et al [15].

As a final conclusion, there is significant difference among various aesthetics dimensions at women tendency to sport activities in parks, meaning that paying attention to each dimension and emphasizing on dimensions that are more considered can enhance sport tendency among the women. Moreover, the findings show that light and color is an important dimension that can promote people tendency because lighting and painting can make small space larger and revive still places and thus, enhances people tendency to physical activity. Form and configuration are put in the second place; meaning that people pay much attention to appearance of sport places and higher psychological nature of these forms attracts more attention of people. This is in agreement with the results reported by Razavi et al [27] regarding the difference; however it is in contrast to the results reported by Razavi et al [27] regarding the order of dimensions. Therefore, aesthetics dimensions of sport places and parks have influence on women participation in athletic and recreational activities; so these dimensions should be considered in architecture of the constructs.

REFERENCES

[7] Bemanian, Mohammadreza; Mahmoudinezhad, Hadi, 2008. Location phenomenology, enhancing space to city location, cultural, communication and publication center of national municipality office.


