Evaluating the Effect of Economic Factors of Family and Individual Factors in Sport Participation of Tehran Citizens, Iran

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Abstract

Public sport has been established with the purpose of increasing participation of all social groups and providing sport pluralism, athletic sport reinforcing, competitive sport, healthy recreations and recreational sport. However, public sport depends on geographical region and social-cultural conditions and includes all organized and unorganized creational sport activities and local-traditional games addressing all the social classes. purpose of this study is to investigate about economic family factors and individual factors affecting sport participation in Tehran`s citizens. To this end, the model proposed by Wicker et al. (2012) has been used to draw a general view regarding the factors affecting sport participation using the internal or individual factors and external factors. The collected data has been analyzed using descriptive statistics including frequency table, diagrams and central indices as well as referential statistics involving non-parametric Kruskal Wallis test, Chi-Square and one-way variance analysis using SPSS software. The obtained findings can be applied to organize and design sport activities for sportsmen.

Introduction

Rapid industrial changes and evolutions have been followed by many social and economic consequences and have left significant effects in people`s leisure. For example, mechanized industries and welfare facilities providing and like that have change people`s life style including minimizing the family dimensions and changing of people`s relations while in the past, family relations played a significant role in people`s leisure. Additionally, mechanizing vehicles, cinema emergence and TV invention have also affected individuals` leisure and it has been not only due to technology development but social needs, relations among the current social powers, social environment and economic environment have highly affected the amount of free time and the way of spending it through recreational facilities. Therefore, the obvious characteristic of today`s leisure is that it has been generalized to all classes and is not limited to a certain social class anymore. Another evolution is its specific importance in individual and social life so that working time has been totally separated from free time and has found an essential value. Leisure has four functions involving sociological and psychological investigations including rest, creativity, social participation, and recreation[1]. So, leisure is not only for recreation but it can play an important role to build individual and social life. In this regards, leisure reveals significant economic benefits since it is important in renewing mental and spirit health. There are many factors leading to spent leisure effectively. By increasing the amount of leisure as a feature of modern world, public sport should also be developed sufficiently to fill individuals` leisure. The special importance of this aspect of sport can be considered as presenting various and interesting types of public sport activities for youths. Public sport can prevent many socially and healthy dangers such as addiction, smoking, HIV and like that[2].

Healthy and efficient work force is a key index of each society`s development. Intellectual and occupational ability of individuals highly depends on their physical health. Life is the most valuable capital of humanand youth period is a mixture of enthusiasm, sensibility and thought in the life. Young people are considered as the vital elements, aware conscience of nations and efficient power of states. On the other hand, physical activity is a main factor protecting individuals` health against disease. Physical activity has a reverse relation with increasing various cardiovascular diseases in adults; so that inactivity or low participation in physical activities causes to increases the risk of cardiovascular disease, high blood pressure, diabetes, obesity, coronary artery occlusion, depression, hip joints fracture, cancer, osteoporosis, and so forth.

It is a long time that sport`s effects in cardiovascular problems has been recognized. But today, it has been revealed that physical activity is useful for all the body, even for brain. Physical activity increases the blood circulation across the body and brain. It seems that increasing blood circulation in the brain lead to make the lossof the brain`s cellular tissues initiating in the age of 40. Researchers are not still sure that to what extent the memory needs to physical activity to be improved but it is obvious that even very little physical activity can improve the memory and it can be maximized in case of doing regular sport at least 3 times a week.

There are several theoretical models to recognize human behavior guiding researchers in studying the physical activities deterministic factors among youth. The dominant model of investigating physical activities is social recognition theory of Bandura. Social recognition theory (social learning theory) emphasizes on individual (recognition, beliefs, intentions), environmental factors (social and material), and behavioral factor (self-review, judgment, reaction). Theory of planned behavior is the other well-known model to recognize the variables affecting physical activities. Ajzen`s theory about planned behavior is used for recognizing behaviors related to physical activities of children and adults.

Mealth promotion model (HPM) is another known model established by association between a number of variables of social recognition theory and expectancy-value theory. The model claims that recognition, action and environment affect individuals` promoting behaviors. The model considers three categories of affective factors including individual experiences and features (characteristic, biological, psychological, social, and behaviors related to the past), recognitions and individuals` specific effects (perceived benefits due to action, perceived barriers related to action, inter-personal effects due to family, peers and other providers, situational effects, related activities effects) and impulsive and accidental behaviors (responding to impulsive demands from sport competition and similar behaviors).

Social learning theory is of important views considering socializing process[3] focusing on individual deterministic factors (belief, tendency and motivation) and external deterministic factors of behavior (social factors, material factors and reinforcements). Learning theory emphasizes that behavior is learnt through direct experience or observing others (modeling). Various researchers have defined sport participation in terms of socializing with a focus on other preferences in sport relating to individuals` tendencies and behaviors. Other preferences provide the necessary social supports to participate in sports. Social support is defined as the functions and tasks of facilitating an action by an individual. For example, social support can be considered as instrumental (helping to go to exercise class), informing (informing about sport programs), emotional (requesting a friend to visit sport exercises). Salesi in his study asserted that social support has different types including companionship, emotional, service, financial, informational, and advices supports. Ficher also introduced three types of social support involving advices support, companionship support and practical support[4].

According to Bourdieu, the most important factors can describe the way of sport behaviors distributions among different social classes in a society are as follows: Economic capital included money income, other financial sources, properties and financial salary, Cultural capital includes tendencies and traditional customs resulted from socialization process and is followed by cultural values such as educational capabilities and skills. Free time[5].

As Bourdieu asserted, sport-oriented social capital is accompanied with social framework in individual (such as age, gender, marital status, etc.) as well as family, friends, colleagues, and other intimates arousing individual`s eager and interest to participate in sport. Sport-oriented economic capital refers to a financial framework providing an opportunity for individual to participate in sport such as job responsibilities, income, social class, etc.

sport-oriented cultural capital is also the cultural frameworks leading to individual`s tendency to sport through mass media (satellite, internet, television, etc.). According to this theory, citizens who can achieve the mentioned capitals can set a regular sport program during the day and select sport-oriented life style for themselves and their family.

Crawford et al. ranked the recognized barriers to participate in sports (including cultural limitations, sever family control, lack of time , facilities , sport places , money, accompany, sense of insecurity, negative experiences, knowledge, mental or spiritual problems, etc.) and proposed the pyramid theory. He classified the barriers into inter-personal, intra-personal and structural categories[6].

While emphasizing on education, income and occupational rank to determine economic-social base regarding the effects of economic-social base in group sport participation, Almond and Power stated that "based on most of the researches findings, citizens with higher education, higher economic status and more professional skills seek to take physical exercisemore than others. In this regards, Cohen (1992) believed that the higher the social class is, the more the social participation and involvement will be. He believed that active participation in social camps, municipal associations, home and school associations, and political organizations are lower in individuals of the low class[7].

As Raymond Thomas stated in his study, age and marital status affect sport participation. Schanler indicated that perceptional barriers for sport including lack of enough time duration, job commitment and family loyalty, bad climate significantly distinguish people who sport and do not sport.

Also, based on the findings reported by Atkinson, Chad, Hug, and Liu, it has been revealed that ease of access to sport facilities and available public sport infrastructures affect sport participation of citizens. Cohen et al. in his study on student, asserts that the dimension of home to school distance decreases sport participation[8].

There are five main category of sociological study of sport including economic, social, cultural, political, and demographic. Some researchers greatly focus on the relation between economic statuses of individuals and sport. The results obtained from these researches indicate that lower class individuals of the society tend to the sports with lower costs while the higher class individuals tend to the costly sports. On the other hand, some

believe that sport facilities should be provided for individuals in all social classes equally[9].

Methodology

The present study investigates macro and micro factors affecting sport participation conducted as a case study in Tehran city in 2012. Based on the last census of 2012, the population of Tehran is 8,244,533 that is considered the most populated city of Iran and the seventh big city of the world. The population of Tehran has been estimated between 1700 to 1100 people each kilometer and it is the sixteenth dense city of the world.

Football is the first and most popular sport in the city. Additionally, wrestling has been highly considered and is the traditional and national sport of Iran. There are 140 state sport places in Tehran. During the research, the data related to macro and micro factors have been collected. Then, the required data has been gathered from the statistical population using designed questionnaires.

Statistical Population and Sample: Considering the fact that statistical population includes a group of individuals, objects, variables, concepts, or phenomena which are common in one feature at least and according to purpose of this study that is to investigate about effect of micro and macro factors in sport participation of Tehran`s citizens; all the people who lived in Tehran during the study time are considered the population of the study. With respect to the dependent variable (sport participation) and the need of continuous participation of individuals in the plan, all age ranges cannot be interviewed. In this regards, men and women of 15-65 years old have taken into the investigation due to avoiding the other inappropriate age ranges.

Sample volume estimation and Sampling method: Considering the research limitations such as lack of enough human force, time, and financial costs, it is not possible to study al the statistical population. Therefore, a small part of the population is selected from the population presenting all the population and is called sample. The sample should present the statistical population; otherwise, the results obtained from the sample cannot be generalized to the population.

$$n = \frac{Z_{(\propto/_2)}^2 \bar{p}(1-\bar{p})}{d^2} = \frac{Z_{\propto/_2}^2 pq}{d^2} = \frac{(1.96)^2 \times (0.5) \times (0.5)}{0.05 \times 0.05}$$
$$= \frac{0.96}{0.0025} \cong 384$$

According to the above formula, d is the sampling error, z is the normal variable of unit corresponding to the confidence level of $1 - \alpha$, P is the estimation of the considered attribute proportion, and q equals with 1 – P. in such researches, P value will be considered 0/5 if it is not determined. In the present study, P equals with 0/5, the sampling error is 5% and the sample size is approximately 384[10].

In the present study, stratified random sampling method was used to select the sample due to heterogeneity of individuals in the population. In this method, the population individuals were classified into different categories based on their inter-group features and the sample individuals are selected from all the categories proportionally. In this paper, the population was divided into several groups based on some distinctive features such as age, gender and residential region, and then the table of the population`s real distribution, the percentage proportion of each categories was estimated in the whole population and real population was determined with respect to each category`s proportion. Afterwards, the number of the sample was selected from all the people of the same category using simple random sampling method (Ezati, 2008).

Considering the above mentioned, the research sample was determined based on Morgan`s table for determining sample size so that the minimum size of the sample is 384 people. Computing the return rate of 90%, 425 questionnaires were distributed among the Citizens who has weekly sport program and of the considered age range to achieve the desired data. The questionnaires were distributed in the considered sport places among the sample randomly[12].

To investigate the significant difference between sport participation in various regions as well as the significant difference between sport participation based on each index, variance analysis test (ANOVA) was used. Notably, all the analyses were done at the confidence level of 95% using SPSS software.

Results and Discussion

Here, descriptive statistics and the tables of the sample`s features have been presented. Recognizing the sample`s features is useful to investigate general characteristics of the population to be used by other researchers. Additionally, they can be used in generalizing the results to other populations.

Table-1
Frequency distribution based on gender

Variables categories	Frequency	Frequency percentage	Valid percentage	Mode
Man	223	52/5%	52/5%	
Woman	202	47/5%	47/5%	1
Total	425	100%	100%	

According to table 1, 52/5% of the sample includes men and 47/5% of the sample includes women. Also, the value of mode is 1 indicating that the most frequency is for men. In other words, mode is a central index determining the most frequency in a distribution and here, male gender has the most frequency.

According to table 2, 52% of the sample does physical activity less than 1 hour, 25/4% of the sample does between 1 to 2 hours, and 10/6% dose more than 3 hours in a week. The value

of mode is 1 indicating that the average of weekly sport exercise in Tehran`s citizens is less than 1 hour.

Table-2
Frequency distribution based on doing weekly physical activity in hour

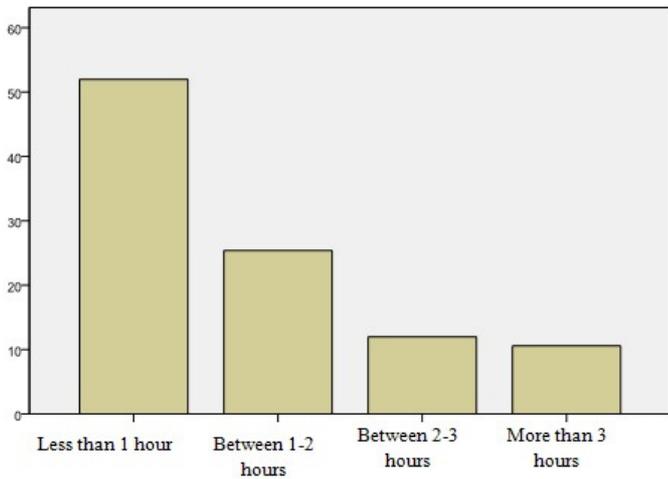| Variables categories	Frequency	Frequency percentage	Valid percentage	Mode
Less than 1 hour	221	52%	52%	
Between 1 to 2 hours	108	25/4%	25/4%	
Between 2 to 3 hours	51	12%	12%	1
More than 3 hours	45	10/6%	10/6%	
Total	425	100%	100%	

Figure-1
The percentage of doing weekly physical activity (in hour)

Table-3
Frequency distribution based on monthly income

Variables categories	Frequency	Frequency percentage	Valid percentage	Median
Less than 133 dollars	58	13/6%	13/6%	
Between 133 to 233 dollars	112	26/4%	26/4%	
Between 233 to 333 dollars	146	34/4%	34/4%	3
More than 333 dollars	109	25/6%	25/6%	
Total	425	100%	100%	

According to table 3, 13/6% of the sample has an income less than 133 dollars, 26/4% of the sample has an income between 133 to 233 dollars, 34/4% has an income between 233 to 333 dollars, and 25/6% of the sample has an income more than 333 dollars. Also, the value of median is 3 indicating that the average monthly income of the sample is between 233 to 333

dollars. In other words, median is a central index determining the most frequency in a distribution and here, male gender has the most frequency.
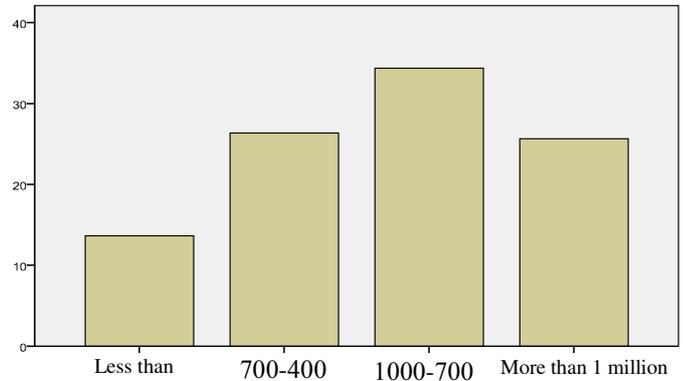

Figure-3
The percentage of monthly income of the sample

Testing hypotheses: The first hypothesis: "There is a significant relation between family income and sport participation in Tehran`s citizens". $H_0$: There is not any significant relationship between family income level and sport participation of Tehran`s citizens. H_1: There is a significant relationship between family income level and sport participation in Tehran`s citizens. The first hypothesis investigates the relation between family income and sport participation in Tehran`s citizens using non-parametric test of Kruskal Wallis due to the variable measurement level and multi-categorical variable.

Table-4
Descriptive statistics

Variable	Number	Mean	Standard deviation
Sport participation	425	1/81	1/015
family income	425	2/72	0/995

According to table-4, the mean value of education level is 2/72 which is more than the mean value of sport participation (1/81).

Table-5
Values ranking

Variable		Number	Mean ranks
Sport participation	Less than 133 dollars	58	240/99
	Between 133 to 233 dollars	112	235/20
	Between 233 to 333 dollars	146	194/06
	More than 333 dollars	109	200/067
	Total	425	

Table-5 presents the categories of income variable in Tehran`s citizens based on ranked sport participation, number and mean of the ranks. As the table shows, the category of less than 133 dollars has the greatest mean.

Table-6
Relation estimation

	Estimation
X^2 computed value	13/380
Degree of freedom	3
P-Value	0/004

Considering the value of Kruskal Wallis statistic and the observed error level (P-Value >0/05), it is concluded that the relation is significant at the confidence level of 99%. In other words, there is a significant relation between family income and sport participation in Tehran`s citizens. So, the null hypothesis is rejected and the alternative hypothesis is accepted. The second hypothesis: "There is a significant relation between available time and sport participation in Tehran`s citizens". H_0: There is no significant relation between available time and sport participation in Tehran`s citizens. $H_1$: There is a significant relation between available time and sport participation in Tehran`s citizens. The second hypothesis investigates the relation between available time and sport participation in Tehran`s citizens using non-parametric test of Kruskal Wallis due to the variable measurement level and multi-categorical variable.

Table-7
Descriptive statistics

Variable	Number	Mean	Standard Deviation
Sport participation	425	1/81	1/015
available time	425	2/16	0/913

According to table-7, the mean value of available time level is 2/16 which is more than the mean value of sport participation (1/81).

Table-8
Values Ranking

Variable		Number	Mean ranks
Sport Participation	Less than 1 hour	95	172/72
	Between 1 to 3 hours	216	192/27
	Between 3 to 6 hours	67	249/15
	More than 6 hours	44	332/30
	Total	425	

Table-8 presents the categories of available time variable in Tehran`s citizens based on ranked sport participation, number and mean of the ranks. As the table shows, the category of more than 6 hours has the greatest mean.

Table-9
Relation estimation

	Estimation
X^2 computed value	76/992
Degree of freedom	3
P-Value	0/000

Considering the value of Kruskal Wallis statistic and the observed error level (P-Value >0/05), it is concluded that the relation is significant at the confidence level of 99%. In other words, there is a significant relation between available time and sport participation in Tehran`s citizens. So, the null hypothesis is rejected and the alternative hypothesis is accepted.

Conclusion

Considering the advantages of sport mentioned, the present study attempted to investigate the effect of economic factors of family in sport participation of Tehran`s citizens. By testing the research hypotheses, the following results can be presented: The first hypothesis investigating the relation between family income and sport participation in Tehran citizens indicated that there is asignificant relation between family income and sport participation in Tehran citizens and the alternative hypothesis was accepted. As it was reported, the average income of the sample was between 233 to 333 dollars indicating that individuals` income has a direct relation with physical exercise activities due to the relation of financial status and sport equipment supply.

The result of testing the first hypothesis is inconsistent with the research done by Breuer. Breuer believes that income of individuals affects on their tendency for taking part in sport activities and there is a positive significant relation among them[13].

In fact, physical exercise costs have a direct relation with productive power and increasing income of countries and sport affects countries' economies with its unique attractiveness. Therefore, investigating consumption pattern of goods and sport services and the trend of their changes during different years can be useful to recognize productive capacities and investing for state and private sections; since sport costs of families and sport participation are related somehow. High proportions of the costs such as housing and food, the average of annual income of family relative to the expenditures, high inflation, and lack of significant participation of people in sport activities relative to other countries are of the reasons leading to low costs of sports from overall costs of family. Therefore, high income of families` income allows families to participate in sport activities in terms of supplying sport facilities and available time.

The second hypothesis of the research investigated the relation between available time and sport participation of Tehran`s citizens. Testing the hypothesis indicated that available time ofmore than 6 hours has the greatest mean of the ranks; in other words, there is a relation between time and sport participation of Tehran`s citizens indicating that Tehran`s citizens will participate in sport activities in case of having more leisure.

Safania based on his study concluded that the sporting time of Azad University students was 127 minutes in a week indicating their interest to participate in sport activities[14].

Jomhari investigated the way of spending leisure of boy students staying at dormitory. He revealed that sport activities are an important part of students` leisure at dormitory; the findings of the present research are consistent with these findings.

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