ABSTRACT
This study aimed to investigate the structural model of the factors affecting participation in the leisure time physical activity of Tehran citizens in district 22. The research method was descriptive and a survey type and data collection method was field study. In this study, 304 people in both gender (152 men and 152 women) were selected as the sample. To determine the validity, the questionnaire was distributed among twelve sports management professors and after data collection, irrelevant items were removed and the tool was used after confirming the face validity. In this study, Kaigang Li (2010) validated, social-ecological questionnaire was used, which consisted of 50 items. Descriptive statistics indices (indices of central tendency, indices of dispersion, and distribution indices) were used for data analysis and one-way ANOVA and correlation coefficient were used for inferential analysis. Finally, the relationship between variables was evaluated using structural equation modeling and LISREL software. The results indicated that physical activity reduced the risk of many harmful health consequences including obesity and leisure time related physical activity with an emphasis on the social support, physical and political environments, psychological and demographic factors were taken into consideration. The results also indicated that a positive relationship existed between leisure time and individuals’ physical and psychological needs and allowed them to involve in multiple sport activities and balance and adapt their behavior. It also led to reduce stress, increase self-efficacy, participation, study and education advancement, and self-esteem.

Keywords: Structural Model, Participation, Physical Activity, Leisure Time
INTRODUCTION

Physical education scientists and experts believed that physical activity, exercise causes physical, mental, and psychological health, and it is one of the most important keys of the physical health. One of the main governments' tasks is to create facilities by which all society members at any age and with any physical ability can utilize them during the lifetime and enjoy the exercise. Exercise as one of the leisure activities has a determinant role in maintaining human's physical and mental health. The physical activity can improve the quality of life for every one of all ages. An active lifestyle makes different people find new friends, remain in the social activities, and communicate with others of all ages. Participation in sports has been usually influenced by personal learning, social interaction and communication with family, friends, relatives i.e. community's formal and informal networks (Fakuhi, 2003). Irrespective of compensating for the weaknesses and maintaining individuals' health, the physical education and exercise prepare them for life, work, and common goals. Using the games in leisure time provides an opportunity for individual's advancement (Farahani, 2006).

Miller and Robinson (1963) defined the leisure as an opportunity for individuals to satisfy their desires and expand their capabilities with choosing optional activities.

People awareness of the favorable effects of sport activities on different body systems led to further increase the tendency for sport activities in their leisure time (Trainor et al, 2010). Studies indicate that many cases of severe aberrations among the youth have been due to the lack of proper planning for spending their leisure time. Therefore, the development of knowledge in this area can play an important role in the proper and effective planning of sport and recreational activities. These programs can be effective on improving individuals' physical and mental conditions and promote the health level in the society. Today's challenge is to discuss the leisure time and effective factors that are involved in how to spend this time and the contents of the programs and activities carried out during this time. The research conducted in this field has shown that in our country, exercise is not at a favorable position among the youth's leisure activities and it often has been received little attention by youth, especially young girls, compared to television and other leisure activities (Koushafar, 1997). The research result has shown that physical activities among the students are in the fourth ranking (ibid). Several factors affect individuals' participation in the leisure time programs that understanding the factors affecting the specific communities has considered a significant demand for the design and construction of intervening programs affecting the leisure time and physical activity in various societies. A number of demographic factors such as age and gender have been identified as factors associated with the physical activity (Anderson et al, 2006). With the development of social and environmental factors, it is expected to observe a secondary time reduction and increased physical activity. The social cognitive theory (King et al, 2001) and ecological model (Sallis et al, 2006; Anderson et al, 2006) have been considered to explain the vast fields of leisure time related physical activity with an emphasis on the social support, physical and
political environment, organizational resources, and psychological factors. The studies indicate that there was a positive relationship between the leisure time and individuals' physical and psychological needs and allowed them to involve in multiple sport activities and balance and adapt their behavior. It also led to reduce stress, increase self-efficacy, participation, study and education advancement, and self-esteem (Huang Chang, 1993; Li Hong On, 1997; Yi and Li, 1999; Chen and Chaw, 2001; Chang Xiao, 2003). Due to the industrialization of societies, today, our society moves towards the sedentariness and inactiveness and individuals' physical activity constantly is decreased and it is followed by overweight. The prevalence of cardiovascular diseases, anxiety, stress, poor mobility and increased medical costs, are effects that have gripped the society (Mahdipur, 2003). In this study, with regard to a relationship between the social-ecological and demographic factors, and given that there is no integrated model in our country, the researchers intend to provide a theoretical model of leisure time among Tehran citizens, district 22.

Figure 1- the theoretical model of effective social-ecological and demographic factors on the participation in leisure time physical activity

Method

In terms of purpose, this descriptive-analytic study is applied and regarding the data collection method, it is a field study. The research population is consisted of all Tehran citizens in adult and youth groups and in terms of gender, it includes men and women. Considering that the number of items is 50, 304 participants of both genders (152 men and 152 women) have been selected as the sample. In this study, Kaigang Li (2010) validated, social-ecological questionnaire including 50 items has been used in the following areas. "Leisure time physical activity" (questions 1-4); "self-efficacy" includes 11 items (6 questions for "external self-efficacy", and 5 questions for "internal self-efficacy", questions 5-15), the six-point Likert scale is used to respond the
questions. "Political belief" (item 16), "social support" includes 11 questions (5 questions for "friends" and 6 questions for "family", items 17-27), "self-regulation" includes 8 questions (4 questions for "goals" and 4 questions for "program"), 5 questions for "understanding the physical environment" (2 questions for "availability" and 3 questions for "environmental quality"), and 10 questions for "importance of outcome expectancy construct" (5 positive questions and 5 negative questions).

The reliability coefficient of preliminary questionnaire is calculated as follows: after distributing the preliminary questionnaire among 35 participants in leisure time physical activity that their work is similar to the available sample, its reliability coefficient has been obtained by calculating Cronbach's alpha using SPSS software, and then, it has been carried out in the sample. The calculated alpha coefficient indicates that questionnaire items are appropriate for describing Tehran citizens' leisure time physical activity because it has internal consistency. To determine the validity, the questionnaire was distributed among twelve sports management professors and after data collection, irrelevant items were removed and the tool was used after confirming the face validity. One-way ANOVA and correlation coefficient were used for inferential analysis. Finally, the relationship between variables was evaluated using structural equation modeling and LISREL software.

Results

1. There is a relationship between social support through mediator variables including self-efficacy, self-regulation, and outcome expectancy construct and participation in the leisure time physical activity.
According to the indices obtained from the structural equation modeling analysis, a significantly positive relationship exists between the social support through mediator variables including self-efficacy, self-regulation, and outcome expectancy construct and citizens' participation in the leisure time physical activity. Based on this model, the relationship between self-efficacy is also stronger than self-regulation and outcome expectancy construct.

2. There is a relationship between the physical environment through mediator variables including self-efficacy, self-regulation, and outcome expectancy construct and participation in the leisure time physical activity.

Given the indices obtained from the structural equation modeling analysis, a significantly positive relationship exists between the physical environment through mediator variables including self-efficacy, self-regulation, and outcome expectancy construct and citizens' participation in the physical activity. According to this model, the relationship between self-efficacy is also stronger than self-regulation and outcome expectancy construct.

3. There is a relationship between political belief and participation in the leisure time physical activity.

The findings of Pearson correlation coefficient test reveal that a significantly positive relationship exists between political belief and citizens' participation in the physical activity ($r=0.63$ and $p-value=0.001$).
4. There is a relationship between physical environment and participation in the leisure time physical activity.

The results obtained from Pearson correlation coefficient test indicate that a significantly positive relationship exists between physical environment and citizens' participation in the physical activity ($r=0.71$ and $p-value=0.001$).

5. There is a relationship between self-regulation and participation in the leisure time physical activity.

The results of Pearson correlation coefficient test indicate that a significantly positive relationship exists between the self-regulation and citizens' participation in the physical activity ($r=0.51$ and $p-value=0.03$).

6. There is a relationship between self-efficacy and participation in the leisure time physical activity.

The results of Pearson correlation coefficient test reveal that a significantly positive relationship exists between the self-efficacy and citizens' participation in the leisure time physical activity ($r=0.67$ and $p-value=0.01$).

7. There is a relationship between outcome expectancy construct and participation in the leisure time physical activity.

The findings of Pearson correlation coefficient test show that a significantly positive relationship exists between outcome expectancy construct and citizens' participation in the leisure time physical activity ($r=0.49$ and $p-value=0.03$).

<table>
<thead>
<tr>
<th>Variables</th>
<th>Participation in the leisure time physical activity</th>
<th>Correlation coefficient</th>
<th>Coefficient determination of determination</th>
<th>No</th>
<th>Sig.</th>
<th>Coefficient of determination of determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political belief</td>
<td>[Table containing the correlation coefficients and significance levels]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical environment</td>
<td></td>
<td></td>
<td></td>
<td>304</td>
<td>0.001</td>
<td>0.63</td>
</tr>
<tr>
<td>Self-regulation</td>
<td></td>
<td></td>
<td></td>
<td>304</td>
<td>0.001</td>
<td>0.71</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td></td>
<td></td>
<td></td>
<td>304</td>
<td>0.001</td>
<td>0.51</td>
</tr>
<tr>
<td>Outcome expectancy construct</td>
<td></td>
<td></td>
<td></td>
<td>304</td>
<td>0.03</td>
<td>0.49</td>
</tr>
</tbody>
</table>

8. There is a relationship between the self-efficacy through self-regulation, a mediator variable, and participation in the leisure time physical activity.
According to the indices obtained from the path analysis, a significantly positive relationship exists between the self-efficacy through self-regulation, as a mediator variable, and citizens' participation in the leisure time physical activity.

9. There is a relationship between the self-efficacy through outcome expectancy construct, as a mediator variable, and participation in the leisure time physical activity.

Considering the indices of the path analysis, a significantly positive relationship exists between the self-efficacy through outcome expectancy construct, as a mediator variable, and citizens' participation in the leisure time physical activity.

10. There is a relationship between outcome expectancy construct through the self-regulation, as a mediator variable, and participation in the leisure time physical activity.
According to the indices obtained from the path analysis, a significantly positive relationship exists between outcome expectancy construct through the self-regulation, as a mediator variable, and citizens' participation in the leisure time physical activity.

11. There is a relationship between age and political belief, social support, physical environment, self-efficacy, self-regulation, outcome expectancy construct, and sport participation.

<table>
<thead>
<tr>
<th>Age</th>
<th>Variables</th>
<th>Coefficient of determination</th>
<th>No</th>
<th>Sig.</th>
<th>Correlation coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.46</td>
<td>Political belief</td>
<td>304</td>
<td>0.006</td>
<td>0.68</td>
<td></td>
</tr>
<tr>
<td>0.50</td>
<td>Social support</td>
<td>304</td>
<td>0.002</td>
<td>0.71</td>
<td></td>
</tr>
<tr>
<td>0.28</td>
<td>Physical environment</td>
<td>304</td>
<td>0.03</td>
<td>0.53</td>
<td></td>
</tr>
<tr>
<td>0.58</td>
<td>Self-efficacy</td>
<td>304</td>
<td>0.001</td>
<td>0.76</td>
<td></td>
</tr>
<tr>
<td>0.58</td>
<td>Self-regulation</td>
<td>304</td>
<td>0.001</td>
<td>0.76</td>
<td></td>
</tr>
<tr>
<td>0.23</td>
<td>Outcome expectancy construct</td>
<td>304</td>
<td>0.05</td>
<td>0.48</td>
<td></td>
</tr>
<tr>
<td>0.35</td>
<td>Sport participation</td>
<td>304</td>
<td>0.02</td>
<td>0.59</td>
<td></td>
</tr>
</tbody>
</table>

The findings of Pearson correlation coefficient test indicate that a significantly positive relationship exists between age and political belief, social support, physical environment, self-efficacy, self-regulation, outcome expectancy construct, and sport participation.

12. There is a relationship between gender and political belief, social support, physical environment, self-efficacy, self-regulation, outcome expectancy construct, and sport participation.

The dependent variable associated with political belief, social support, physical environment, self-efficacy, self-regulation, outcome expectancy construct, and sport participation based on Eta correlation coefficient test indicates that considering the gender in calculation and prediction of each variable, 58%, 71%, 67%, 58 %, 74 %, 63% and 75% of the prediction errors have been reduced respectively.

**Discussion and conclusion**

**There was a relationship between social support through self-efficacy, self-regulation, and outcome expectancy construct, as mediator variables and participation in the leisure time physical activity.**

A significantly positive relationship existed between the social support through self-efficacy, self-regulation, and outcome expectancy construct, as mediator variables, and citizens' participation in the leisure time physical activity. Based on the model, the relationship between self-efficacy was also stronger than self-regulation and outcome expectancy construct. This finding is consistent with the Kai Zheng Li (2010)'s results.

**There was a relationship between the physical environment through self-efficacy, self-regulation, and outcome expectancy construct as mediator variables and participation in the leisure time physical activity.**
A significantly positive relationship existed between the physical environment through self-efficacy, self-regulation, and outcome expectancy construct as mediator variables and citizens' participation in the physical activity. According to the model, the relationship between self-efficacy was also stronger than self-regulation and outcome expectancy construct.

The results indicated that there was a relationship between the self-efficacy and participation in the leisure time physical activity. It can be stated that someone who is able to overcome his/her internal obstacles through his capabilities, he/she has an ability to participate in the leisure time physical activity and benefit from its numerous advantages. This finding is congruent with the results of Anderson (2006), Bandura (2004), and Lee (2010).

**There was a relationship between political belief and participation in the leisure time physical activity.**

Given that the political belief is originating from the government's approach in relation to the cost of walking, cycling, and physical activity with the aim of society's health promotion, this principle is also observed in leisure time physical activity participation. This result is consistent with Lee (2010)'s results.

**There was a relationship between physical environment and participation in the leisure time physical activity.**

The results indicated that access to an appropriate physical environment both accessibility and quality of the physical environment would determine people's expectations due to participation in leisure time physical activity. This result is consistent with the results of Kai Zheng Li (2010) studies.

**There was a relationship between self-regulation and participation in the leisure time physical activity.**

The results of Pearson correlation coefficient test indicated that a significantly positive relationship existed between the self-regulation and citizens' participation in the leisure time physical activity. This finding is consistent with Kai Zheng Li (2010) results.

**There was a relationship between self-efficacy and participation in the leisure time physical activity.**

The results of Pearson correlation coefficient test revealed that a significantly positive relationship existed between the self-efficacy and citizens' participation in the leisure time physical activity. This result is in line with Kai Zheng Li (2010)'s study.

**There was a relationship between outcome expectancy construct and participation in the leisure time physical activity.**
The findings of Pearson correlation coefficient test indicated that a significantly positive relationship existed between outcome expectancy construct and citizens' participation in the leisure time physical activity. This result is in accordance with Kai Zheng Li (2010)'s study.

**There was a relationship between the self-efficacy through self-regulation, as a mediator variable, and participation in the leisure time physical activity.**

Given the indices obtained from the path analysis, a significantly positive relationship existed between the self-efficacy through self-regulation, as a mediator variable, and citizens' participation in the leisure time physical activity. This finding is consistent with Kai Zheng Li (2010)'s results.

*There was a relationship between the self-efficacy through outcome expectancy construct, as a mediator variable, and participation in the leisure time physical activity.*

Considering the indices of the path analysis, a significantly positive relationship existed between the self-efficacy through outcome expectancy construct, as a mediator variable, and citizens' participation in the leisure time physical activity. This finding is in line with Kai Zheng Li (2010)'s results.

*There was a relationship between outcome expectancy construct through the self-regulation, as a mediator variable, and participation in the leisure time physical activity.*

According to the indices obtained from the path analysis, a significantly positive relationship existed between outcome expectancy construct through the self-regulation, as a mediator variable, and citizens' participation in the physical activity. This finding is in line with Kai Zheng Li (2010)'s results.

*There was a relationship between age and political belief, social support, physical environment, self-efficacy, self-regulation, outcome expectancy construct, and participation in the leisure time physical activity.*

The findings of Pearson correlation coefficient test indicated that a significantly positive relationship existed between age and political belief, social support, physical environment, self-efficacy, self-regulation, outcome expectancy construct, and participation in the physical activity. This finding is consistent with the results of and Kai Zheng Li (2010).

*There was a relationship between gender and political belief, social support, physical environment, self-efficacy, self-regulation, outcome expectancy construct, and participation in the physical activity.*

The dependent variable associated with political belief, social support, physical environment, self-efficacy, self-regulation, outcome expectancy construct, and sport participation based on Eta
correlation coefficient test indicated that considering the gender in the calculation and prediction of each variable, 58%, 71%, 67%, 58 %, 74 %, 63% and 75% of the prediction errors had been reduced respectively. This finding is consistent with Kai Zheng Li (2010)'s results.

It has been widely found that physical activity reduces the risk of many harmful health consequences including obesity (Anderson et al, 2001). Previous studies revealed that high levels of LTPA are associated with decreased risk of individuals' obesity (King et al, 2001). To assess the relationship between physical activity and health benefits, the dose concept was borrowed from the clinical medicine to determine how health benefits are increased along with rising activity levels (Lee, 2007). It should also be noted that the social-psychological models could not alone design to develop intervening strategies that aimed to make changes beyond the personal and individual levels. By developing social and environmental factors, it is expected to reduce the time of inactivity behavior and increase the physical activity levels. The social cognitive theory (King et al, 2001; Owen et al, 2000) and ecological models (Sallis et al, 2006) have been applied to explain the vast fields of leisure time related physical activity in which the social support and physical environment as well as psychological factors may be existed.

Overall, the ecological-social framework has intrapersonal, interpersonal, and physical environments and political factors. The intrapersonal factors are mainly self-efficacy, self-regulation and outcome expectancy construct; self-efficacy refers to an individual's assumed confidence to do to an intended activity (e.g. physical activity) and overcome obstacles of its implementation. The outcome expectancy construct is defined as "an expectation that an outcome will be looking for a special treat" (Williams et al, 2005). Outcome expectancy construct is different from outcome expectancy that refers to the conjecturable aspects of behavior but it does not reflect the importance of assumed outcome of behavior. Self-regulation is considered as a key determinant of social cognitive theory of physical activity (Bandura, 1997). The interpersonal factors mainly include social environmental factors such as social support from friends and families. The positive social factors such as social support from friends (Brownson et al, 2001), social support from family (Sallis, 1987; Young & Stewart, 2006), and exercise partners (Sallis, 1987; Rodgers et al, 2005) are associated with higher levels of participation in the physical activity. In contrast, the negative social factors may prohibit or reduce participation in physical activity. The results of this study showed that there was a relationship between self-efficacy and participation in physical activity. It can be stated that someone who is able to overcome his/her internal obstacles through his capabilities, he/she has an ability to participate in the leisure time physical activity and benefit from its numerous advantages. This finding is congruent with the results of Anderson (2006), Bandura (2004), and Lee (2010).

The results also indicated that a relationship existed between political belief and participation in physical activity. Given that political belief is originating from the government's approach in relation to the cost of walking, cycling, and physical activity with the aim of society's health
promotion and doing an activity is dependent on accessibility and optimum quality, this principle is also observed in leisure time physical activity participation. This result is consistent with Lee (2010)'s results.

The results also indicated that there was a relationship between access to physical environment and participation in the physical activity. It appeared the existence of an appropriate physical environment both accessibility and quality of the physical environment would determine people's expectations due to participation in leisure time physical activity.

The findings indicated the absence of relationship between other intervening variables in participation in leisure time physical activity. Unlike the previous studies, the results of this study are inconsistent with the results of Anderson (2006), Bandura (2004), and Lee (2010). Perhaps one of the possible reasons is respondents' lack of understanding of the questions. In addition, in our country, the lack of proper structure in participation in the leisure time physical activity has caused that having a superficial and unstructured attitude of leisure activities, most participants involve in leisure time physical activity based on personal and one-dimensional attitudes.

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