Prioritization of the Barriers and Advantages of Female Employees’ Participation in Daily Sports Activities (Case Study: Tehran Water and Wastewater Organization)

Leila Rostami\(^1\) and Hamid Qasemi\(^2\)

\(^1\)Department of Physical Education, Sciences and Research Branch, Islamic Azad University, Tehran, Iran
\(^2\)Department Of Physical Education, Payam Noor University (PNU), Tehran, Iran

Abstract

This study aimed to prioritize the barriers and advantages of female employees’ participation in daily sports activities (Case Study: Tehran Water and Wastewater Organization). This was applied descriptive filed survey study. The population consisted of all female employees in Tehran Water and Wastewater Organization (N=300). Using Morgan table and simple systematic random sampling method, 169 employees were selected as sample. The research tool was a questionnaire. It was consisted of 5 (social, cultural and religious, familial, personal, economic and facilities) components and 30 questions. Its validity was confirmed by 8 experts in sports management. Using Alpha Cronbach, its reliability was obtained to be $\alpha=0.84$. The data were analyzed conducting Kolmogorov-Smirnov test, one way variance analysis and Friedman, in SPSS Software 22. The social, cultural and religious, economic and facilities, personal, and familial factors were identified as five major barriers to female employees’ participation in sports activities. All of these barriers had a significant impact on women’s participation in sports activities. However, the social barriers were in first place; and cultural and religious, familial, personal, economic, and facilities factors were in next rankings.

**Keywords:** Physical Activities, Sport Participation, Social Barriers, Cultural and Religious Barriers.
1. Introduction

According to Islam, basically, the human body should be valued and respected. The physical activity which strengthens body and makes it healthy is considered to be desirable and necessary in Islam. Even the philosophy of many human activities such as cleaning, washing and other health instructions which are emphasized by Islam is strengthening human body and health. In various parts of Koran and sayings and traditions of Prophet Mohammad (SAW) and Imams (AS), the good health and its improvement are considered as human and religious duty (Shabani Bahar, 2012). On the other hand, physical and mental health has always been one of the most important objectives during the centuries (Hemati Nejad, 1990). As a social fact, the sport and physical activity has always been performed in human societies from a very long time ago and forms part of their everyday life. Despite many advantages of sport and physical activity for people and society, one of the most important challenges facing the planners and policy makers in today’s societies is inactivity of people. The industrialization of societies and entering to world of various technologies has impacted all aspects of human life, including their physical activity. The sport for all is a form of physical activity or regular attendance at physical activity causes physical and mental well-being and health, forms social relations, and has positive results. On the other hand, the strengthening of physical, mental, and social aspects is associated with attendance in championship competitions. This may lead to creation of values and achievements in various national and international fields (Teymouri, 2007). The history represents natural tendency of man to physical activity. In primitive societies or ancient culture, there were no organized physical education programs. However, the physical activity was an integral part of everyday life of people. The healthy, strong, and trained body was a characteristic of people in the past time (Mozaffari and Gareh, 2006).

Today, the development of science, technology, and industry has led to great changes in human life. The machinery movement has served a lot to communities and humanity; but, it also had led to inactivity problem (Safarzadeh, 1997). Due to rapid socio-economic changes in recent years, the physical education goals should be organized in such a way that will be sufficient to meet the needs of new cultural models (Hematinejad, 1990).
In a general classification, the sport is divided into two general recreational and championship categories. The sport for all is a synonymous of recreational sport. It addresses a variety of simple, inexpensive, informal, fun, and playful sport activities which allow the participation of everyone. These activities are usually performed individually or collectively in places such as stadiums, parks, plains, and natural places inside and outside the city. According to various definitions of Sport for all and recreational sport, they have some specific features such as extensive and group participation of people, free and selectable, low cost, low importance of competition and winning and losing, not limited to age, gender, race, time, and place, and having playful and happy nature. The championship sport is another category. Usually, people perform these sports as their job and engage full-time in them. Actually, a limited number of people engage in championship sport due to problems such as time-consuming, high cost, exhausting physical activity, and etc. However, due to industrialization of today life, people need to perform more physical activities. People are working in organizations that do not necessarily have much physical activity. Then, this has led to low activity of employees and their decreased efficiency in daily activities. They spend a large part of their time in organizations. Therefore, if they want to be more active, they should perform physical activities in out of service time. Most people may perform recreational sports in leisure time.

According to statistics published by Center for Women's Participation Affairs, more than half of population in Iran is composed of girls. However, the percentage of women participation in sports activities is different in different countries. Unfortunately, even in third millennium in all countries, the number of women who perform sports activities is less than half of number of men. In most countries, especially developing countries, there are several barriers to women's sports activities in social, cultural and religious, personal, familial, and economic aspects. In Iran, women and girls face with serious inactivity problem due to inhibiting factors in using sports facilities.

Today, people face with decreased physical activity due to development of modern societies, increasing use of machinery tools, and minimized manual jobs which were associated with heavy physical activities. However, the organizational jobs have led to many physical problems such as spinal disorders and even psychological disorders and harms. So, regular daily sport activity is
recommended for everyone. The exercise in early hours of day may increase blood circulation, increase vitality, relieve boredom, and prepare body and brain to perform daily activities. It may also have many advantages for employees who sit inactive in their desk during the day. These advantages are important and worthy of consideration in terms of both individual and social aspects. The consideration of exercise impact on women in terms of physical conditions, work pressures, and possible limits is also very important. Today, in many countries, governments are planning to optimize leisure and physical activities of women in order to make them active and promote their health. As one of main pillars of society, today, women participate in social, political, sports, and etc. areas. However, their continuous and regular daily exercise may make them happy, relaxed, and mentally healthier; therefore, their happiness may transfer to their work and family life and then to whole society. Meanwhile, some female employees cannot perform sport activities after work hours due to their work type, workbusyness, and familial duties and responsibilities. So, they should perform sport activities in early morning before work or during hours between lunch and prayer.

According the above, this study aims to determine the advantages and barriers to female employees’ (Tehran Water and Wastewater Organization) participation in regular daily sport programs. For this purpose, the barriers are classified into 5 major categories. Then, they will be prioritized using analytic hierarchy process. Also, the advantages of continuous daily sport activities in various aspects of personal and work life of female employees will be determined. The ultimate goal of this study is to improve the conditions of female employees in society in terms of sporting activities especially in their organizations, increase their efficiency in workplace, and improve their physical and mental health in community.

Today, sport and physical activity is an integral part of strategic plans of governments for all different groups of society. This is especially important for women who are the breeders of future generations. Given the current condition of (women) sport activities, it can be seen maximum percentage of them are not participated in these activities. Therefore, it is important to investigate, identify, and describe the factors affecting this issue. Despite the limited studies conducted on minimum participation of women in sports activities, the reasons and barriers to female employees’ sport activities and advantages of regular exercise in personal and work life
has not been studied. In current situation of society, women perform many activities and responsibilities at various levels of organizations. Also after leaving workplace, they have many tasks in home. Therefore, their physical and mental health is important.

Despite different studies on positive impact of physical activity on health, especially on employees who are suffering from inactivity due to long working hours, there are few studies on impact of daily exercise (especially, exercise in morning) on activity of individuals and in particular female employees, barriers to their physical activities, and providing solutions for them. Therefore, obviously, there is a need for further research in this area.

Research questions:

1. Is there significant difference between advantages of participation in sport activities and average condition?
2. How the barriers to women's participation in sports activities are prioritized?
3. How the advantages of women's participation in sports activities are prioritized?
4. Is there significant difference among barriers to women's participation in sport activities in terms of education level?

2. Research Methodology

This was applied descriptive filed survey study. The population consisted of all female employees in Tehran Water and Wastewater Organization (N=300). Using Morgan table and simple systematic random sampling method, 169 employees were selected as sample. The research tool was interview and questionnaire. Conducting literature review, the advantages and barriers to female employees’ participation in sports activities were identified to design the questionnaire. To complete the barriers and advantages, a questionnaire was designed based Delphi basic concept. It was distributed among female employees in Tehran Water and Wastewater Organization. Finally, a questionnaire with 5 components and 30 questions inLikert 5-point scale was prepared. Then, it was used after confirmation of its validity and reliability. Since Alpha Cronbach is usually a good indicator to assess the reliability of research tool and inner harmony among its elements, it was used to assess the reliability of questionnaire in this study. The researcher used survey method to collect the data and complete the questionnaire.
Therefore, 169 questionnaires were distributed among female employees systematically. The female employees were asked to complete the questionnaires and deliver them to researcher. The data were analyzed using descriptive (including frequency distribution tables, central tendency indices (mean), dispersion indices (standard deviation), and charts) and inferential statistics (Kolmogorov-Smirnov test, one way analysis variance and Friedman) in SPSS Software, version 22.

3. Findings

The demographic findings were as follow. In terms of marital status, 21.9% of participants were single and 78.1% were married. In terms of age, it was found that 41 to 50 years old age group was most frequent (38.5%), while the lowest frequency was for below 30 age group (7.1%). In terms of academic level, most of the participants were graduate (40.8%). In terms of exercise level per week, 11.8% exercised 3 times a week and 75.1% had no exercise. In terms of career experience, the findings showed that the highest frequency relates to 11 to 15 years (32.5%) and lowest frequency relates to below 5 years (20.1%).

The findings show that the mean of research variables including social barriers, cultural barriers, economic barriers, personal barriers, and family barriers is 3.39, 3.61, 4.01, 3.60, and 3.48, respectively. Thus, the highest mean is for economic barriers and lowest mean is related to social barriers.

Inferential analysis of data:

Normality of data distribution:

The Kolmogorov-Smirnov (KS) test was used to investigate the normality of variables distribution. According to table (4-6), all distributions are statistically normal.

Table 1: Kolmogorov-Smirnov test statistics for normality of data distribution

<table>
<thead>
<tr>
<th>Research variables</th>
<th>Statistics</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>z</td>
<td>p</td>
</tr>
<tr>
<td>Social barrier</td>
<td>1.33</td>
<td>0.06</td>
</tr>
</tbody>
</table>
Inferential tests:

How the barriers to women's participation in sports activities are prioritized?

The Friedman test was used to prioritize the barriers to women's participation in sports activities. According to Table 2, there is a significant priority among barriers to women's participation in sport activities.

Table 2: Friedman test results

<table>
<thead>
<tr>
<th>Number</th>
<th>165</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-square</td>
<td>13.65</td>
</tr>
<tr>
<td>Degree of freedom</td>
<td>4</td>
</tr>
<tr>
<td>Sig. level</td>
<td>0.04</td>
</tr>
</tbody>
</table>

The table 3 shows the prioritization of barriers to women's participation in sport activities. The highest priority is for social barriers and lowest priority is for economic and facility barriers.
Table 3: Prioritization of barriers to women's participation in sport activities

<table>
<thead>
<tr>
<th>Item</th>
<th>Ranking mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social barrier</td>
<td>3.21</td>
</tr>
<tr>
<td>Cultural and religious barrier</td>
<td>3.02</td>
</tr>
<tr>
<td>Familial barrier</td>
<td>2.91</td>
</tr>
<tr>
<td>Personal barrier</td>
<td>3.08</td>
</tr>
<tr>
<td>Economic and facility barrier</td>
<td>2.78</td>
</tr>
</tbody>
</table>

How the advantages of women's participation in sports activities are prioritized?

The Friedman test was used to prioritize the advantages of women's participation in sports activities. According to Table 4, there is a significant priority among advantages of women's participation in sport activities.

Table 4: Friedman test results

<table>
<thead>
<tr>
<th>Number</th>
<th>167</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi square</td>
<td>26.89</td>
</tr>
<tr>
<td>Degree of freedom</td>
<td>4</td>
</tr>
<tr>
<td>Sig. level</td>
<td>0.01</td>
</tr>
</tbody>
</table>

The table 5 shows the prioritization of advantages of women's participation in sport activities. The highest priority is for physical advantages and lowest priority is for career advantages.

Table 5: Prioritization of advantages of women's participation in sport activities
Is there significant difference among barriers to women's participation in sport activities in terms of education level?

The one way variance analysis was used to compare the barriers to women's participation in sport activities in terms of education level.

Table 6: Results of one way variance analysis to compare the barriers to women's participation in sport activities in terms of education level

<table>
<thead>
<tr>
<th>Change source</th>
<th>Total square</th>
<th>Degree of freedom</th>
<th>Mean square</th>
<th>f</th>
<th>Sig. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social barrier</td>
<td>Intragroup</td>
<td>0.577</td>
<td>4</td>
<td>0.14</td>
<td>3.51</td>
</tr>
<tr>
<td></td>
<td>Between groups</td>
<td>46.695</td>
<td>164</td>
<td>0.28</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>47.272</td>
<td>168</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural and religious barrier</td>
<td>Intragroup</td>
<td>1.144</td>
<td>4</td>
<td>0.29</td>
<td>0.56</td>
</tr>
<tr>
<td></td>
<td>Between groups</td>
<td>83.355</td>
<td>163</td>
<td>0.51</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>84.499</td>
<td>167</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Familial barrier</td>
<td>Intragroup</td>
<td>0.386</td>
<td>4</td>
<td>0.10</td>
<td>0.21</td>
</tr>
<tr>
<td></td>
<td>Between groups</td>
<td>74.444</td>
<td>163</td>
<td>0.46</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>74.830</td>
<td>167</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
According to table 6, there was no significant difference among barriers to women's participation in sports activities in terms of education level.

4. Discussion and Conclusion

This study aimed to investigate the barriers and advantages of female employees’ participation in daily sports activities (Case Study: Tehran Water and Wastewater Organization). This was applied descriptive filed survey study. The population consisted of all female employees in Tehran Water and Wastewater Organization (N=300). Using Morgan table and simple systematic random sampling method, 169 employees were selected as sample. The research tool was a questionnaire. It was consisted of 5 (social, cultural and religious, familial, personal, economic and facilities) components and 30 questions. Its validity was confirmed by 8 experts in sports management. Using Alpha Cronbach, its reliability was obtained to be α=0.84. The data were analyzed conducting Kolmogorov-Smirnov test, factor analysis, one-sample t-test, independent t-test, Friedman, Bartlett's sphericity test, and KMO coefficient in SPSS Software, version 22.

The social, cultural and religious, economic and facilities, personal, and familial factors were identified as five major barriers to female employees’ participation in sports activities. All social (t=15.53), cultural and religious (t=9.98), familial (t=10.57), personal (t=13.71), and economic and facilities (t=6.75) barriers had a significant impact on women's participation in sports activities (P<0.05). However, the social barriers were in first place; and cultural and religious, familial, personal, economic, and facilities factors were in next rankings. Also, participation in
sports activities had career, physical, psychological, social, and familial advantages for these women. All had significant impact on participation of women in sports activities. However, the career advantage was at first ranking. Finally, it was found that there was no significant difference among barriers to women's participation in sport activities in terms of their education level. From among barriers to women's participation in sports activities, the familial (t=3.93, P< 0.05) and personal (t=3.93, P< 0.05) barriers were significantly less in single women than married women.

Reviewing the literature and previous research and surveying sports management professionals, many factors were determined as barriers to women participation in sport activities. Using exploratory factor analysis, the social, cultural and religious, familial, personal, economic, and facility factors were determined as 5 major barriers to women's participation in sports activities. This result was consistent with research results of Motameni and colleagues (2015), Gahremani et al. (2014), NaderianJahromy and Hashemi (2010), Wall Set and Estranbu (2014), and Saini (2013). Today in Iran, many factors prevent the presence and active participation of women in sports activities. For example, there is no suitable support of women in sports activities; also, women do not have a successful model in sport field. The issues including relatively high cost of sports activities, Islamic culture, lack of time for women, the physically weak stereotypic mentality about women, housework, and children education have restricted women’s participation in sports activities. Overall, after studies and exploratory factor analysis, social, cultural and religious, familial, personal, economic, and facility factors were determined as 5 major barriers to women's participation in sports activities. These factors will be discussed in the following.

The social barriers are one of the barriers to women's participation in sports activities. One sample t-test results showed social barriers have a significant role in women's participation in sports activities (t=15.53, P< 0.01). According to positive t and higher mean from hypothetical mean, this role is positive. In other words, women face with some social barriers to participate in sports activities. This result was consistent with research results of Motameni and colleagues (2015), Gahremani et al. (2014), NaderianJahromy and Hashemi (2010), Wall Set and Estranbu (2014), and Saini (2013). Motameni et al (2015) stated that lack of authorities’ attention to women's sports is the most important factor in social barriers to women's participation in sport
activities. Gahremani et al (2014) confirmed that social and cultural barriers are one of the barriers to female teachers’ participation in sports activities in Marand. Naderian Jahromy and Hashemi (2010) also determined this factor as one of the barriers to female employees’ participation in sports activities in Esfahan. Wall Set and Stranbu (2014) studied the impact of culture and religion on Norwegian and Pakistani young women’s participation in sport activities. They also showed that these factors (social factors) impact on participation of women. We are social beings. Living in society, we face with certain norms and sometimes restrictions that affect all aspects of our life.

The cultural and religious barriers are other barriers to women's participation in sports activities. One sample t-test results showed these barriers have a significant role in women's participation in sports activities \( (t=9.98, P<0.01) \). This result was consistent with research results of Motameni and colleagues (2015), Gahremani et al. (2014), Naghdi et al. (2012), Naderian Jahromy and Hashemi (2010), Teuro et al (2014), Wall Set and Estranbu (2014), Eskurika and Meyer (2012), and Wall Set (2010). Motameni et al (2015) stated that male-dominated culture is the most important factor in cultural barriers to women's participation in sport activities. Gahremani et al (2014) confirmed that cultural barriers are one of the barriers to female teachers' participation in sports activities in Marand. Naghdi and colleagues (2011) confirmed that family's cultural capital is one of the factors affecting women's participation in sport activities. Teuro et al (2014) stated that gender stereotypes are one of the cultural factors in children's participation in sport activities. Eskurika and Meyer (2012) concluded that Indian women and other ethnic minorities (immigrants) do not have opportunity to participate in sports and recreational activities due to social and cultural exclusions compared with Australian women. The cultural and religious norms in society may affect many aspects of life.

The personal barriers are other barriers to women's participation in sports activities. One sample t-test results showed these barriers have a significant role in women's participation in sports activities \( (t=13.71, P<0.01) \). This result was consistent with research results of Motameni and colleagues (2015), Aghayi and Fatahian (2013), and Naghdi et al. (2012); also, it was inconsistent with research results of Gahremani et al (2014). Motameni et al (2015) stated that lack of time is the most important factor in personal barriers to women's participation in sport activities. Aghayi
and Fattahian (2013) and Naghdi et al (2012) considered the personal factors such as lack of motivation for sport participation as barriers to women's participation in sport activities. However, Gahremani and colleagues (2014) did not consider personal factors as barriers to female teachers’ participation in sports activities. The research population is probably the most important factor in this inconsistency. The female teachers in Marand were the population in study of Gahremani and colleagues (2014). Given their career type, it seems that lack of confidence or embarrassment in these people is much lower than female students. Obviously, people need special personality traits, special physical abilities, interest, motivation, and etc. to do anything.

Friedman test was used to rank the barriers to women's participation in sports activities. The results suggested that social factors ranked first among the barriers to participation in sport activities. After social barriers, the cultural and religious, familial, personal, and economic and facilities factors are in next rankings. This result was inconsistent with research results of Mirghafoori and colleagues (2010), Ehsani et al. (2008), and Kashkar (2007). Mirghafoori et al (2010) concluded that the economic-facility factors are the most important barriers to women participation in sports activities. It should be noted that female students were the research population in study of Mirghafoori and colleagues (2010). Students do not have sufficient income; probably, this is the reason of economic factor priority relative to other barriers. Ehsani et al. (2008) and Kashkar (2007) reported the structural factors as the most important barrier to women participation in sports activities.

Friedman test was also used to rank the advantages of women's participation in sports activities. The results suggested that career advantage ranked first among the advantages of participation in sport activities. After career advantage, the physical, psychological, familial, and social advantages are in next rankings. As noted, exercise has advantages for participants. According to participants, the career advantage has the first priority. This means that participation in sport and physical activity impacts primarily on job effectiveness and efficiency of female employees. Participating in sports activities, the career effectiveness, efficiency, and productivity will increase and these women will be more motivated to participate in workplace. This reduces work absenteeism and increases participation in workplace. Also, exercise increases vitality at
workplace during the day and lead to appropriate behavior with clients, effective and positive communication with co-workers, increased tolerance in workplace, and increased efficiency and productivity of female employees. In addition to career advantage, there are many other advantages for women participation in sport activities such as physical, psychological, social, and familial advantages. Many physical and psychological advantages such as prevention of many diseases are obvious.

References


