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**RESEARCHING ABOUT SAFETY STATUS OF SPORTS SPACES IN
EDUCATIONAL DEPARTMENTS OF QAZVIN PROVINCE AND COMPARE IT
WITH NATIONAL STANDARDS**

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ABSTRACT

The main objective of this study was to assess the safety statue of sport spaces in educational departments of Qazvin Province with national standards. The present study was based on the purpose, practical type, descriptive and comparative due to the data collection. Applied check list was designed and set up according to the standard formats in a way that could cover all the necessary items needed to study sports spaces. The research population included all sports spaces related to educational departments of Qazvin Province with a total number of 81available sports space and since all sporting spaces had been examined, the number of samples were also81. For filling the check list, the researcher went to the mentioned sports spaces on a particular day predetermined and examined carefully the cases with the necessary tools, such as meters and then noted in the check list in the desired section. Filling the check lists was done for all mentioned sports spaces and finally they were compared with the standards. The findings of the study showed that there was a significant difference between the safety statue of sport spaces in educational departments of Qazvin Province due to the

five safety criteria of health facilities such as seating, equipment and sporting goods safety, construction and facility safety and pool safety compared with national standards.

Keywords: Places safety, pool safety, health facilities safety, equipment and sporting goods safety, seating safety, construction and facility safety

INTRODUCTION

Nowadays, the role of sport in physical and mental health of the public is obvious and physical education and sport can play an important role in providing mental health and wellbeing, especially in the car's life that most people do not have enough mobility and suffer from movement poverty (Iilkah, 1998). In the current world system, the development of sport places and its promotion is one of the major objectives of active and alive organizations. In particular, these objectives in the institutions such as physical education organization, sports federations and other executive institutions with sports places which are associated with different groups of people and international levels are playing crucial roles (Kargar, 2005).

Although the development of sports places of Qazvin Province educational departments has had good growth in recent years, but the reality is that little research has been done on issues such as safety. Safety of Sport places has a significant importance due to its relation with athletes' health, especially students. Therefore, the aim of this research is to asses this issue in educational departments of Qazvin

Province which students are major consumers of its sports spaces. The main objective of this study is to assess the safety statue of sport spaces in educational departments of Qazvin Province and comparison with national standards.

LITERATURE REVIEW

Sports places can be divided into two categories: outdoor and indoor. Sports hall of education are indoor spaces usually used for sports teams' practice of region or area as well as other sports activities (Ramezanejad, 2002). Safety is in relation to this issue of how we can use this tool to develop all aspects of the sport in accordance with international standards (Farsi, 1996).

Given that these sport spaces are the bed of enforcing activities and sports programs and their quantity and quality of them has a direct impact on the implementation of practices, sports tournaments and competitions and development exercise among different segments of society, therefore sport science experts concerned predictive factors and the type of design and construction of necessary sport places for young people in the country. Building

sport places require great care because errors in the planning, design, construction and use of in appropriate equipment and sports facilities results in irreparable damage to human and loss of budget, time and energy and will also have negative affect on the future performance of sports organizations. Some of the findings show that sports spaces as well as sports equipment used in sports training centers are undesirable due to their safety (Farsi, 1998).

Safety of factors such as hygiene and cleanliness, light, ventilation, heating and cooling systems, flooring, fire fighting equipment, different sports equipment and accessories including stands, gate base, base for fixing net or basketball hoop are cases that can be effective in increasing or decreasing the risk of sports injuries. There is no doubt that the construction of a sports places and facilities with all laws, regulations, and necessary standards can be effective in attracting different groups of people to sport and also reduce accidents and sport injuries. Definitely, sport places that don't have any good safety result in accidents and sports injuries and will prevent the realization of desired goals in education and sports competitions are also

faced with disruption. Facilities required at Sports halls such as showers, locker rooms, bathrooms, flooring, heating and cooling systems, sound and proper light prevent from systematic exploitation of these places (Sayebani, 1994).

Safety in public places, facilities and sports equipment

The social importance of sport has increased steadily. Activity and exercise have been more and more every day apart of lives of many segments of society. Sport activities are being done in the places, sport facilities and equipment, so their role in response to this positive trend is very important (Jalali Farahani, 1998).

Of course, responsibilities of officials and managements of sport places, facilities and equipment for the realization of these goals are not easy. Only when all the components of the operating system do their tasks in a good way, there is the possibility of achieving the goals. One of the most important tasks and measures is to create a safe condition in accordance with health standards in the sport environments (Jalali Farahani, 1998). Figure 1 refers to sports complex refers to the Performance of Sport Complex system:



Figure 1: An optimum performance system in sport complexes (Jalali Farahani, 1998: 133)

RESEARCH BACKGROUND

Abdali(2011) in an article entitled "investigating Safety and health status of indoor sport halls in educational departments of Zanjan Province," stated that indoor sport places of educational departments of Zanjan Province were not in a good situation compared to current standards. Also, the knowledge of sports administrators in health and safety issues was not desirable.

Hagigi(2014) in an article entitled "Study of the safety status of spaces and sport equipment in public boys and girls schools from different levels of education in Kermanshah" wrote, safety situation were examined in five components of the ground and surfaces, borders and lines, design and size, facilities and equipment. Descriptive statistical methods to determine the safety status of various factors, as well as binomial and Kruskal Wall is tests to

evaluate difference in safety situation at different levels of education and three areas in Kermanshah province using SPSS software at a significance level of $P < 0.05$ were used. The results showed that safety status of spaces and sport equipment in Kermanshah public schools in many cases were not in a good situation compared to current standards. According to the results of research and the importance of sport in schools and reported shortages, safety regulations using the standards of ASTM were provided.

Balkeh, et al (2013) in an article entitled "The benefits of attention to standards" believe that education and health practices and increased knowledge of health and safety in accordance with standard procedures by staffs effectively helps to reduce pollution of swimming pools.

Lhotsky (2014) in a study entitled

"Analysis of risk management in football stadiums of United States of America colleges "explored risk management in football stadiums and achieved these results: 45% of stadiums had insurance their audience against accidents that the insured amount was more than ten million dollars.

By studying related literature and the theoretical foundations related to the field of Sport places safety, it can be noted that, in general much research in this field has not been done in the country despite the sensitivity of the issue and it is necessary to examine the issue more accurate than before. Research have been done in and out of country is more on various and related fields with safety sporadically and before focus on the safety is mostly on the importance of the safety and this reflects the newness of the subject. However, issues related to standardization which is generally have a good overlap with safety issues already started and in general, the framework of most researches is in the fields of construction and facilities , seating, platforms and covers, health status and sport equipment and pool safety. Some studies also point to the other side factors. However, what can complete our understanding of the safety status of sport spaces of Qazvin province and be more effective in the perspective of management

and personnel of it is using frameworks and raised principle in this area. This research in the sectors related to construction, grandstand, hygiene, safety and pool safety equipment, sporting goods and sports spaces Office of Education will review the province. Therefore, this research will assess sport spaces in educational departments of Qazvin Province in the sectors related to construction, seating, health condition, pool safety and safety equipment and sporting goods.

RESEARCH METHODOLOGY

The present study is based on the purpose, practical type, descriptive and comparative due to the data collection. Applied check list is designed and set up according to the standard formats in a way that could cover all the necessary items needed to study sports spaces. For filling the check list, the researcher goes to the mentioned sports spaces on a particular day predetermined and examines carefully the cases with the necessary tools, such as meters and then notes in the check list in the desired section. Filling the check lists is done for all mentioned sports spaces and finally they are compared with the standards. The research population including all sports spaces related to educational departments of Qazvin Province with a total number of 81 available sports space and since all

sporting spaces has been examined; the numbers of samples are also 81.

Before any test that is done under the assumption of normality of the data, the researcher should be ensured from the normality of the data. So the first step is to test the normality of the data. For this purpose, the Kolmogorov-Smirnov test was used. Statistical assumptions are set as follows:

$$\left\{ \begin{array}{l} H_0: \text{data distribution is normal} \\ H_1: \text{data distribution is abnormal} \end{array} \right.$$

When considering data normalization, the null hypothesis is be tested based on the normal distribution of the data at the level of 5%. So if a significant amount, greater or equal 0.05 is obtained, then there will be no reason to reject the null hypothesis. In other words, the data is normally distributed. Normal distribution assumption was tested at a significance level of 5%. Normalizes data are not necessary in the confirmatory factor analysis and structural equation modeling but also the main factors should be normal (Klein, 2010).

Output of Kolmogorov-Smirnov test shows a significant amount smaller than 0.05 obtained in all cases. Therefore, distribution of measurement data of each dimension is abnormal.

The Main Question Test

How is the Safety statue of Sports spaces in educational departments of Qazvin Province?

The safety statue of sport spaces in educational departments of Qazvin Province due to the five safety criteria such as, health facilities, equipment and sporting goods, seating, construction and facility and pool in the year of 1381 (2002). Sport spaces in 14 cities have been studied. Each safety aspects have been studied based on a checklist of requirements. Therefore, the available safety statue of sport spaces in educational departments of Qazvin Province have been presented due to the five dimensions in Table 2. Whatever the percentage is close to 100, it means that the desired sport spaces have been closer to the standards.

The data in Table 3 show that the safety status of health facilities in the sports halls is better as well as the safety statue of health facilities in the artificial grass is the worst. In Figure 4-6, the difference of safety status of health facilities for each sport spaces is provided by national standards.

In terms of safety, health facilities of sport shall with a score of 69% have the most safety. Pool safety position with a score of 63%, gym with a score of 60%, natural grass with a score of 62% and artificial

grass with a score of 59% are above average level.

Sub-question 2 test

- ✓ How are the Safety statue of Sports spaces seating in educational departments of Qazvin Province due to national standards?

The check lists of commitments consisting of sixteen items have been used to assess the safety statue of spectators seating. Whatever the percentage is closer to 100, it means that the desired sport spaces have been closer to the standards. Namely those

in the control list derived from technical standards, should be in compliance with all the sport places.

In Figure4, the safety status differences of spectators seating for each sport space is provided with national standard.

As it can be seen, pool seating in term of safety are below the standard level in all sport spaces. Meanwhile, the safety statue of pool seating is the worst. Artificial grass safety and sports hall are relatively better. Safety of spectators seating in natural grass and gym are also not in good condition.

Table1: Data normality test (Kolmogorov-Smirnov)

Security of construction and facilities	Safety of equipment and sporting goods	Pool security	Security of spectators seating	Safety and health facilities	
81	81	81	81	81	N
3/88	3/53	3/68	3/72	3/70	Average
0/517	0/610	0/425	0/389	0/525	Standard deviation
4/089	1/830	1/963	1/647	2/188	Kolmogorov-Smirnov
0/000	0/002	0/001	0/007	0/000	Significant
abnormal	abnormal	abnormal	abnormal	abnormal	Result

Table 2: Safety percentages of all five dimensions for each sport space

Pool	constructions and facilities	spectators seating	Equipment and sporting goods	Health facilities	
%67/90	%55/67	%45/43	%53/85	%51/21	Security statue

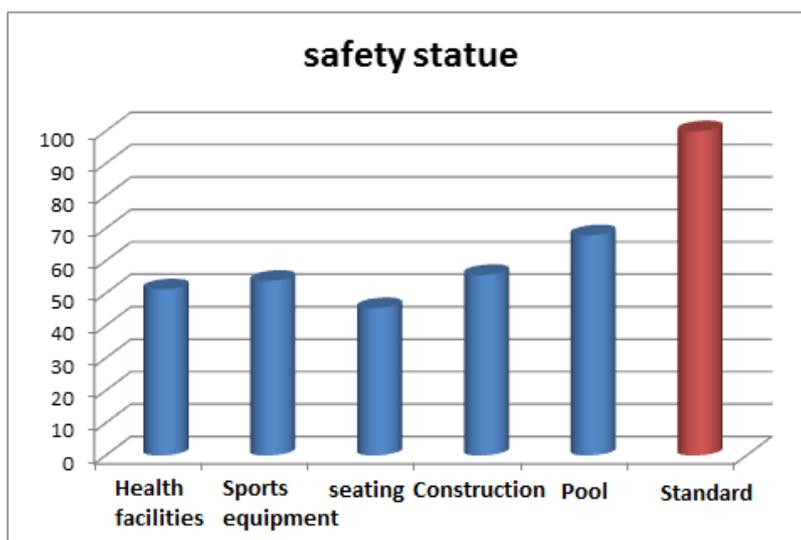


Fig2: Safety percentage of Sports spaces in educational departments of Qazvin Province

Table 3: the safety statue of health facilities

Score percentage	Average score in Qazvin	Average score in standard		Safety statue of health facilities
%59	6/6	9/4	Artificial grass	
%62	6/1	9/9	Natural grass	
%63	6/3	10/7	Pool	
%60	6/4	9/6	Gym	
%69	6/7	10/4	Sport space	

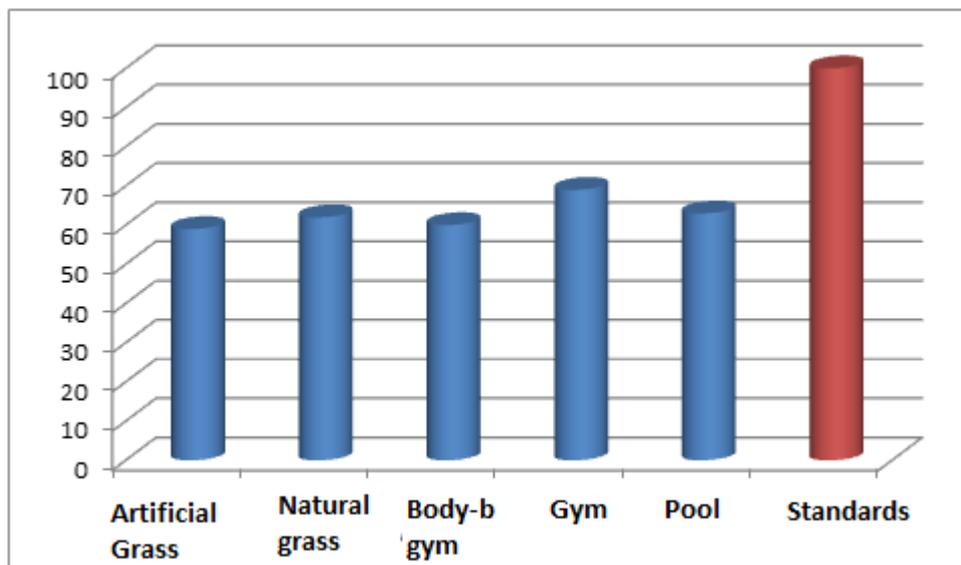


Figure 3: Difference in the safety Percentages of health facilities in each sport spaces compared to Standard

Table 4: the safety statue of spectators seating

Score percentage	Average score in Qazvin	Average score in standard		Safety statue of spectator seating
%72	4/5	7/8	Artificial grass	
%66	6/4	9/9	Natural grass	
%60	2	3/5	Pool	
%71	2/3	5/7	Gym	
%76	1/7	5/3	Sport space	

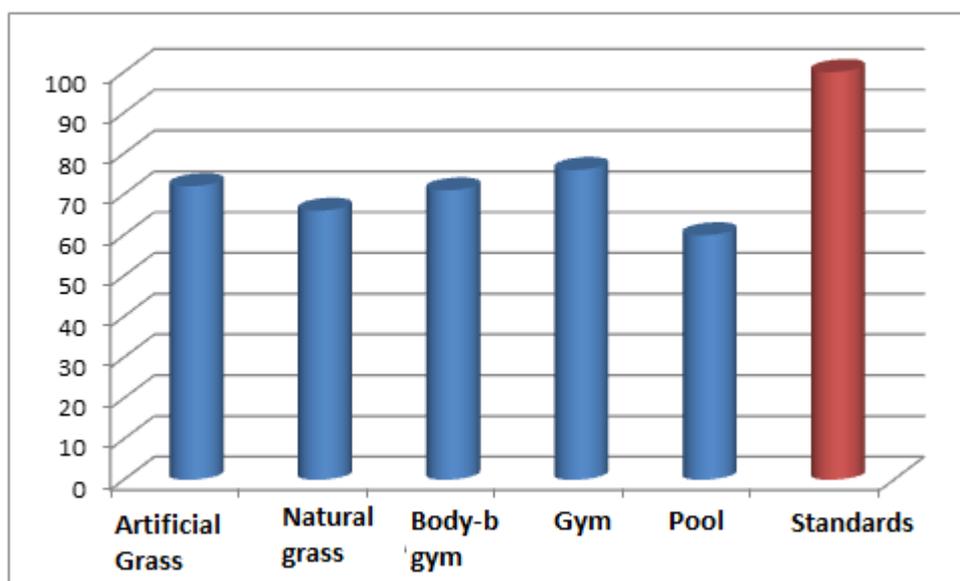


Figure4: Difference in the safety Percentages of spectators seating equipment compared with Standards Sub-question 3 test

- ✓ How are the Safety statue of equipment and sporting goods in educational departments of Qazvin Province due to national standards?

The check lists of commitments consisting of twenty items have been used to assess the safety statue of equipment and sporting goods. Whatever the percentage is closer to 100, it means that the desired sport spaces have been closer to the standards. Namely those in the control list derived from technical standards, should be in compliance with all the sport places.

In Figure 5, the safety status differences of equipment and sporting goods are provided with national standard.

In terms of safety, equipment and sporting goods of sport shall with a score of 80 % have the most safety. The safety of equipment and poll sporting goods is in the worst status.

Sub-question 4 test

- ✓ How is the Safety statue of constructions and sport spaces facilities in educational departments of Qazvin Province due to national standards?

The check lists of commitments consisting of forty items have been used to assess the safety statue of constructions and sport spaces facilities. Whatever the percentage is closer to 100, it means that the desired

sport spaces have been closer to the standards. Namely those in the control list derived from technical standards, should be in compliance with all the sport places.

In Figure 6, the safety status differences of constructions and sport spaces facilities are provided with national standard.

As it can be seen, In terms of constructions safety, artificial grass safety with a score of 64%, sporting hall with the score of 59% and pool with the score of 53% are in better statue. Also, the safety statue of artificial grass constructions is the best and the safety of natural grass and gym is below standard level.

Sub-question 5 test

- ✓ How is the Safety statue of pool in educational departments of Qazvin Province due to national standards?

The check lists of commitments consisting of twenty items have been used to assess the safety statue of pool. Whatever the percentage is closer to 100, it means that the desired sport spaces have been closer to the standards. Namely those in the control list derived from technical standards, should be in compliance with all the sport places. In Figure7, the safety status of pool is provided. As it can be seen, pool safety Figure with a score of 81%, is lower than the standard level.

Table 5: the safety statue of equipment and sporting goods

Score percentage	Average score in Qazvin	Average score in standard		Safety statue of spectator seating
%60	2	3	Artificial grass	
%79	1/5	5/5	Natural grass	
%50	1/5	1/5	Pool	
%55	1/5	2	Gym	
%80	1/6	6/4	Sport space	

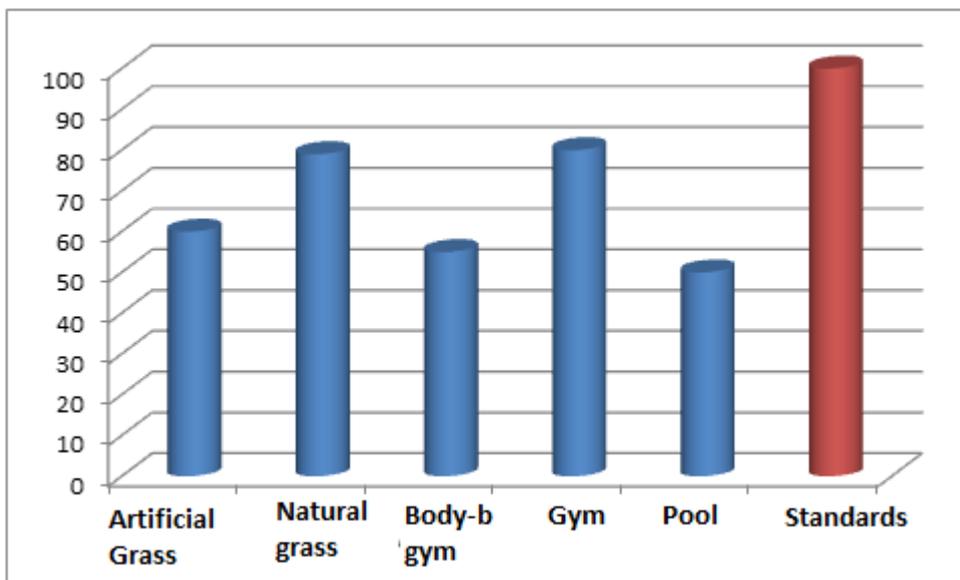


Figure 5: Difference in the safety Percentages of equipment and sporting goods compared with Standards

Table 6: the safety statue of constructions and sport spaces facilities

Score percentage	Average score in Qazvin	Average score in standard		Safety statue of construction and facilities
%64	6/2	11/8	Artificial grass	
%51	7/4	11/6	Natural grass	
%53	5/6	10/7	Pool	
%52	6/1	9/6	Gym	
%59	4/6	10/4	Sport space	

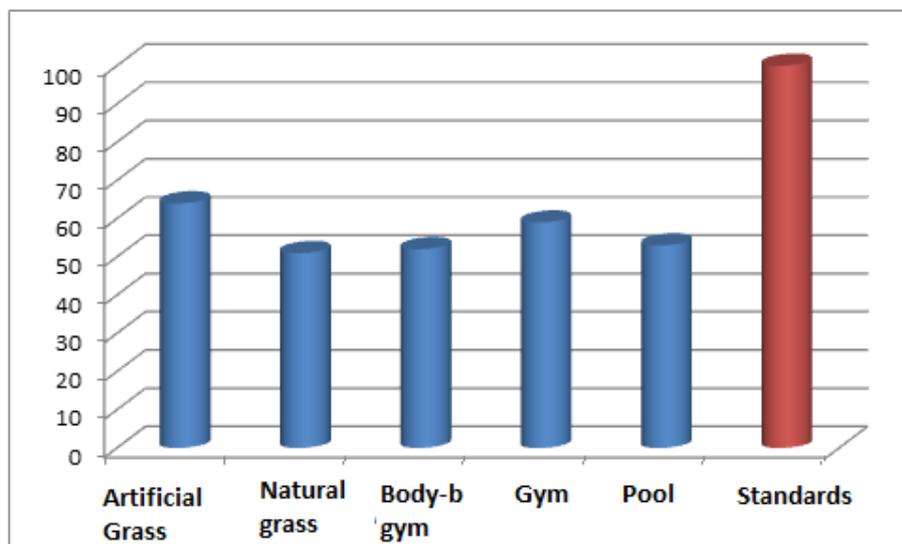


Figure 6: Difference in the safety Percentages of constructions and sport spaces facilities compared with Standards

Table 7: the safety statue of pool

Score percentage	Average score in Qazvin	Average score in standard	Average score in Qazvin	
%81	3/2	5/7	8	Pool

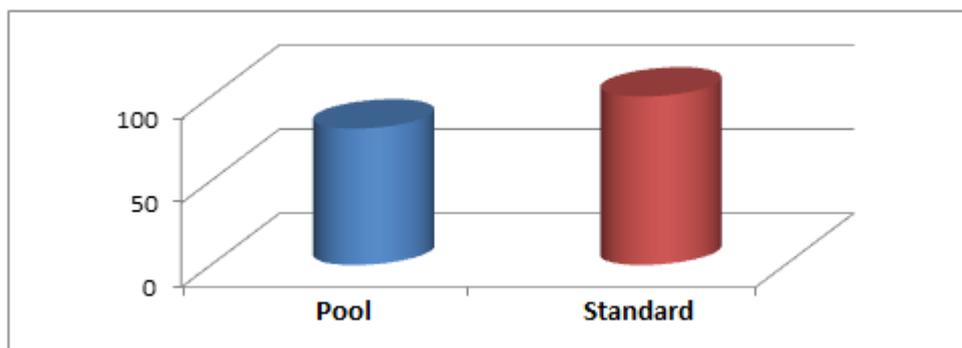


Figure7: The safety status of pool

CONCLUSION

The result of the research showed that the safety status of constructions and sport spaces facilities in educational departments of Qazvin Province is in the lower level compared to standards and the non-compliance with construction and facilities safety is one of the basic problems of sport halls. So that, Taylor (quoted from Eskraton, 2004, Elliott (1993), Amirtash, Rahimi and Khabiri(2002), Zazarin et al (2004), the National Union of American Consumers(2002), Jaberiet al. (2006), Elahi et al (2003), Sayahand Arab Ameri (2002), Farsi(1998), Latsky(2006), Halalizadh et al. (2006) Esfahan Kalat and Asgharpour (2007) in their research and assessments have pointed to this problem. Of course, these researches have reported further non-compliance with safety rules on the spectator seating, shield status, ceilings and walls and input and output doors that frequently are causes of various accidents,

deaths and injuries on the sports fields. Therefore, it seems necessary to observe criteria and the safety indicators of building and facilities in order to prevent from such incidents. This issue is not only one of the legal obligations of directors, but also moral and human responsibility for them which can help to the expansion and both qualitative and quantitative growth of the sport and activities related to it. Managers and builders of sports places should before, during and after the construction of sports halls and playgrounds carefully pay attention to the design, construction, materials used, equipment, processes and procedures to achieve their safety requirements. A very important point in this regard is the maintenance of sports places that is starts with construction and establishment of them. Unfortunately, in many sport places, there is not any written program for the maintenance of these places and ignoring the maintenance

system and repairing facilities and sport infra structures lead to reduce safety and increase costs of these places. (Javanmardi and Bagheri, 2011). There is significant difference between safety statues of equipment related to sport spaces in educational departments of Qazvin Province with national standards. Probably, lack of suitable context for the presence of physical education specialists in the management of sport places, non-allocation of sufficient budget to provide standard equipment and also low standards of available equipment on the market, etc. are factors that are effective in low quality of equipment in these places. Of course, this subject needs to be investigated further. However, the department of education due to legal requirements and the necessity to respond the parents managed to be successful in this regard to some extent with the use of experts (teachers and sport teachers). However, there is still a considerable distance to reach the standards (Javanmardi and Bagheri, 2011). The present is consistent with the research of researchers like Farsi (1998) and Fooladian (2010). They also stated that safety statue of places and training sport spaces of country is not appropriate. According to the researches of many scholars, material resources with a sport nature are the most important harmful parts of the places and

sports spaces, both outdoor and indoor floors and the flooring of the sport grounds in 71% of cases is harmful. This aim is not considered in making the oldest stadium with a proof, lighting towers and shallow slopes of seating (Farsi, 1998). Sport spaces in educational departments of Qazvin Province from all considered components to the standards are lower which this issue shows the necessity of review and reform risk situation in the sport places. Providing complete Safety of facilities, and sports equipment is a difficult, complicated and time consuming work but this can be done efficiently with correct and logical predictions. It is obvious that it is nearly impossible to eliminate all risk factors in the area of physical and sport activity; however planners must apply all their efforts in the design and construction of facilities and places to minimize the risks and the injury to the participants and spectators (Ashoori Tvstany, 2009). In this study, only 5 safety components have been considered and therefore it is recommended to the future researchers to assess sports space from other aspects.

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