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Comparison of Immune Status of Open Spaces, Sports Schools and Provide Strategies to Mashhad City

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School

ABSTRACT

Due to population growth and consequently the construction of student population growth areas of sport as factors in education based on scientific principles is considered therefore develop principles, standards, scientific and technical to make these spaces is required. The aim of this research study of secondary schools safe spaces outdoor sports city of Mashhad and provide appropriate solutions. In this descriptive study - a survey in the study population was 90-89 all the regular high school - formed a government in Mashhad. The study sample included 41 high schools that was randomly half of the three floors have, half have, not have. Research tools include special list of Czech sports outdoor spaces were safe. The overall safety level of three regions in the walls, sanitary services and medical equipment and relief spaces outdoor sports in schools is low compared to the results showed that the regions have areas with safety levels are better than other areas Safety Division and in land, privacy, the equipment was no difference between the areas. In this study, 42 school athletic atmosphere of safety in different areas from different angles were evaluated from the results of this study and other research it is concluded that the safety situation is poor sport spaces. Between all components of the safety study showed that only mean safety equipment components and other components of health services following a moderate average. Any direction should be to note that even a non-secure case may also lead to large financial losses and Johnny but there is common sense that with appropriate arrangements can be little risk in case the author will resolve safety.

Introduction

Today, the phenomenon of sports as an undeniable necessity and a basic need and the foundation of all societies has received the attention of everyone. Among the positive effects of this phenomenon is the provision of health and readiness of people to face hardships and difficulties, the growth of moral and heroic virtues, Physical fitness and beauty is learning different sports skills, learning sports behaviors, the skill of using free time for pleasure and entertainment, etc. (Danaei *et al.*, 2007). On the other hand, the position of physical education and sports in Islam is a very high and valuable position, because in the school of Islam, man has two dimensions, material and non-material, and man is responsible for following the path of evolution and getting closer to God Almighty. and for this purpose, Islam discusses sports as a value

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and one of the principles of human education and mentions physical training as a suitable tool for training the body and soul through sports activities (Ramazannejad, 2003).

Freeman (1988) believes that the goals of physical education are in line with the general goals of education and include the physical, mental and emotional development and flourishing of students. . In other words, physical education is considered an integral part of education and plays a vital role in realizing the general goals of education and raising an informed and cheerful generation.

The Education Organization, which is in charge of the education of 16 million people, especially infants, teenagers and young people, is responsible for ensuring their physical and mental health through the development of physical education programs in schools. Therefore, the expansion of physical education programs in schools is one of the basic needs of education and the necessity of its continuation in all educational levels is undeniable. Considering the various functions and roles that are envisioned from physical education lessons in schools, accurate and appropriate planning on the one hand, and taking the necessary measures to achieve the set goals on the other hand, is very vital and important (Nouri 1998). growth of the country's population and the consequent growth of the student population, the construction of educational spaces has been considered as one of the effective factors in education based on scientific standards. Since the spatial and physical features of the educational unit are known as one of the factors influencing the level of students' learning, it is necessary and necessary to compile principles, rules and scientific and technical criteria for the construction of such spaces. One of the most important issues related to sports spaces in schools is the safety status of sports places. Do these places and complexes have proper safety and health? Do students have enough security while participating in sports and extracurricular classes? Can students do sports activities in these places without any worries? Ensuring the safety of school sports facilities is important from the point of view that students experience an important period of their lives that coincides with their physical and mental growth in school, and considering the vulnerability of this group, it is necessary to provide a safe and healthy environment. And health care provided and guaranteed their health so that people can exercise in complete safety and leisure). The result of which is to improve the level of health and flourishing of their talents and their development in all dimensions (cognitive, psychomotor, skill, emotional) and causes these effects to be transmitted to the family and society, and to make people more familiar with sports and their ideas and beliefs. Inaccuracy in them should be minimized, the result of which is the tendency of more and more members of society towards physical activity and obtaining its many advantages for individuals and society (Ramadan, 2005).

The existence of obstacles and non-standard, dangerous, depreciated and worn-out devices will undoubtedly cause physical injuries and even in some cases the death of the users of such spaces (Pohal 1999). Several researches have pointed out the problems of proper and serious implementation of physical education lessons in official school hours.

In a research titled "Investigation of the safety status of sports venues in Kashan", the tourists were investigated and the most frequent occurrence of hazardous factors in sports venues was related to the game equipment, including the condition of the bases of the gates or nets and the surface of the playing fields (Sayah *et al*., 2005).

Farsi in a research titled "Examination of the safety status of sports spaces in the country's schools and providing suitable solutions" and the data analysis showed that in general, the safety level of sports spaces in the country's schools is low in all four regions (Farisi *et al*., 2006).

In a research titled "Description and Comparison of Safety Management in Physical Education Classes of Ahvaz City Middle School", Hosni concluded that

safety management in physical education classes is generally at an average level (Hosni *et al*., 2008).

Injuries caused by lack of safety are also seen in other countries.

In a study entitled "Injuries Occurred in Schools" in the United States, Knight concluded that the most common cause of sports injuries in schools is falling and colliding with objects and equipment in schools (Knight *et al*., 2001)

In a research entitled "Reducing the amount of injuries in children's playgrounds" in America, Philan concluded that the financial cost of injuries caused by playgrounds is more than one billion two hundred million dollars. He reported that the highest rate of injuries occurs in schools and falls from sports equipment, which is higher compared to other places such as parks and public sports venues (Filan *et al*., 2001).

In a research entitled "Finding the appropriate safety level of playgrounds in Elazig city in Turkey", Akik concluded: 60% of playgrounds do not have fences or barriers to keep children from entering the street, 87.5% of playgrounds They do not have a suitable and good surface, 95.8% of the equipment in the fields are not safe, and 83.3% of the playground equipment has sharp edges (Akik *et al*., 2004).

Powellconcluded in a research titled "Safety of Playgrounds" that 70% of the injuries caused by falling on the ground were due to an unsuitable surface (asphalt) and 75% of these areas had dangerous objects (glass, pebbles, etc.) (Powell *et al*., 2005).

According to the mentioned cases and with a quick look at the history of physical education and sports in the country for about 80 years, we clearly understand that there have always been some problems in the curriculum of physical education and sports in schools, and based on the available evidence, we have to accept that the lack of Optimal planning (to achieve the general principles and goals of physical education) In education and training in various fields, such as the lack of sufficient and standard sports equipment, devices and places and the creation of a safe and healthy environment, it will cause a waste of time, money, huge human capital and cause irreparable damage to the society and individuals became. Taking into account about 15 million students and two hours of physical education classes per week and predicting 26 school weeks in one academic year, we reach a number of nearly one billion hours of students' best time every year, which if in a few decades of this existence If the lessons in schools are multiplied, we reach a very large number (Ramadan, 2007)

Materials and Methods

Methods

According to the main goal, the current research method is descriptive-survey type. In this research, the desired information was collected by preparing a checklist and by attending each selected school and analyzed using descriptive statistical methods. The method and method of collecting information was done by regular observation in person and the collected data has an objective aspect.

Population and statistical sample

The statistical population of the present study is all day and night public high schools for boys in the seven districts of Mashhad in the academic year 2009-2012. The number of the statistical population includes 91 high schools in the mentioned districts.

According to the maximum standard deviation of the initial sample (0.22), using a sample of 41 with 95% confidence creates an error of less than 0.05 in the estimates. 42 samples were selected in this research (Delaware 2014).

$$n_0 = \frac{z^2 s^2}{d^2} = \frac{1.96^2 \times 0.22^2}{0.05^2} = 74$$

$$n = \frac{n_0}{1 + \frac{n_0}{N}} = \frac{74}{1 + \frac{74}{92}} = 41$$

For sampling from 7 educational districts, 3 districts have been selected in such a way that they are placed in three categories: rich (areas with higher income,

facilities and cultural level than other regions), semi-rich and underprivileged. Random area has been operated) and all the schools in these areas have been investigated. In total, the cluster sampling method was used in three strata: rich, semi-rich and poor.

Information gathering tool

The information gathering tool includes a special checklist for the safety of outdoor sports spaces.

The aforementioned checklist was made by the researcher and a five-point Likert scale (very high, high, moderate, low, very low) was used in it.

In order to score the level of security based on the safety checklist, each of the questions has been given a score of 1 to 5, and due to the inequality of the number of questions related to each item, the average has been used to measure the safety in each dimension.

Based on this, scores close to 3 mean average safety, and the closer we get to five, it means higher safety, and numbers close to 1 indicate a low level of safety.

Safety questions in six categories, including sports fields (11 questions), boundaries (17 questions), walls (9 questions), supplies and equipment (24 questions), sanitary services (12 questions), medical and relief equipment (7 questions) and in A total of 80 questions were designed**.**

Validity and reliability of research tools

In order to prepare the checklists, first, based on the examined categories and its diverse areas, several questions were collected based on the required criteria, and the checklists were prepared and designed using a combined method and the following items:

1- Studying theoretical foundations and research literature, observing some of the causes of injuries and threats in competitions and activities.

2- Studying the checklists available in other countries including England and America.

3-The researcher's observations in a number of places and then extracting questions by observing the risk factors**.**

The face validity of the checklist has been confirmed by physical education management professors.

Due to the fact that the checklists were completed based on observations, some of the checklists were completed by two people, and due to the strong correlation of the answers for the two completers (0.963), it can be accepted that the checklists have adequate reliability are.

Statistical analysis

In this research, we have described the sample under study using the descriptive statistics method by drawing frequency tables and calculating the mean, standard deviation and variance Then, after proving the normality of the population using the Kolmogorov-Smirinov test, and finally, considering the distance of the values related to safety, using the Pearson correlation coefficient test and the analysis of variance test, as well as Tukey's follow-up test, inferring the research findings from the sample to the studied population. We have paid.

Hypotheses testing was done at a significance level of $P < 0.05$. SPSS software package version 16 was used for data analysis and EXCEL software version 2007 was used for drawing figures.

Results

The first research question: What is the safety status of the outdoor sports fields of schools in different areas?

The results of one-way analysis of variance analysis (Table 1) and its comparison with the significant level show that the safety status of outdoor sports fields of schools in different areas is not statistically significant.

The second research question: What is the safety status of outdoor sports areas of schools in different areas?

The results of the one-way analysis of variance

analysis (Table 2) and its comparison with the significant level show that the safety status of the outdoor sports spaces of schools in different areas is not statistically significant.

The third question of the research: What is the safety condition of the walls of outdoor sports spaces of schools in different areas?

The results of the one-way analysis of variance analysis (Table 3) and its comparison with the significant level show that the safety condition of the walls of the outdoor sports spaces of schools in different areas is statistically significant.

The fourth question of the research: What is the safety status of equipment and outdoor sports spaces of schools in different areas?

The results of the one-way analysis of variance analysis (Table 4) and its comparison with the significant level show that the safety status of outdoor sports facilities in schools in different areas is not statistically significant.

The fifth question of the research: What is the safety status of the sanitary facilities of outdoor sports spaces of schools in different areas?

The results of one-way analysis of variance analysis (Table 5) and its comparison with the significant level show that the safety status of the sanitary facilities of the outdoor sports spaces of schools in different areas is statistically significant.

The sixth research question: What is the safety status of medical equipment and aid in outdoor sports spaces of schools in different areas?

The results of one-way analysis of variance analysis (Table 6) and its comparison with the significant level show that the safety status of medical equipment and aid in outdoor sports spaces of schools in different areas is statistically significant.

The summary safety indicators of outdoor sports spaces of schools in different areas using Tukey's test shown in Table 7.

Table 1. Comparison of the average safety of school outdoor sports fields in different areas using ANOVA test

	Non-applicable	Semi-applicable	Applicable	F (2.41)	P-value
Average	2.67	2.80	2.77	0.34	0.72
Standard deviation	0.58	0.53	0.27		

Table 2. Comparison of the average safety of outdoor sports spaces of schools in different areas using ANOVA test.

	Non-applicable	Semi-applicable	Applicable	F (2.41)	P-value
Average	2.31	2.45	2.58	1.16	0.32
Standard deviation	0.61	0.27	0.49		

Table 3. Comparison of the average safety of the walls of outdoor sports spaces of schools in different areas using ANOVA test.

	Non-applicable	Semi-applicable	Applicable	F (2.41)	P-value
Average	3.10	3.07	2.85	3.47	0.04*
Standard deviation	0.41	0.15	0.22		

*: There is a significant difference (P>0.05).

Table 4. Comparison of the average safety of equipment and outdoor sports spaces of schools in different areas using ANOVA test

	Non-applicable	Semi-applicable	Applicable	F (2.41)	P-value
Average	3.12	3.21	3.14	0.20	0.82
Standard deviation	0.37	0.42	0.19		

Table 5. Comparison of the average safety of sanitary facilities of outdoor sports spaces of schools in different areas using the ANOVA test

	Non-applicable	Semi-applicable	Applicable	F (2.41)	P-value
Average	3.55	3.45	3.83	9.80	*0.00
Standard deviation	0.30	0.23	0.18		

*: There is a significant difference (P>0.05).

Table 6. Comparison of the average safety of medical equipment and aid in outdoor sports spaces of schools in different areas using ANOVA test.

	Non-applicable	Semi-applicable	Applicable	F (2.41)	P-value
Average	2.50	2.50	3.00	11.89	*0.00
Standard deviation	0.50	0.11	0.20		

*: There is a significant difference (P>0.05).

Table 7. Summary safety indicators of outdoor sports spaces of schools in different areas using Tukey's test.

		P-value	Non-applicable	Semi-applicable	Applicable
Safety		Non-applicable		0.514	0.000
		semi-applicable	0.514		0.000
		applicable	0.000	0.000	
Safety	**The walls**	Non-applicable		0.703	0.000
		semi-applicable	0.703		0.000
		applicable	0.000	0.000	
	Sanitary facilities	Non-applicable		0.399	0.000
		semi-applicable	0.399		0.000
		applicable	0.000	0.000	
	Medical equipment and relief	Non-applicable		0.154	0.000
		semi-applicable	0.154		0.000
		applicable	0.000	0.000	

Discussion

The component inside the sports fields

This component was examined with 11 questions, which included things such as leveling of the land, no seams and gaps, no holes for the installation of rods, no uncovered water passage holes, no gravel and extra materials on the ground, etc.

Considering that the average safety score of the fields in the three investigated areas is 2.74 (less than average), then we conclude that the safety condition of the open sports fields in all the public high schools of Mashhad is low in terms of the average, and there is a difference from this There is no distinction between regions. The component of land safety is important in the sense that research abroad indicates the existence of deaths due to low land safety,

including the presence of inappropriate surfaces. The researcher's observations of the schools showed that most of the visited lands lack sufficient space for activities, have an inappropriate surface, including lack of smoothness and smoothness, the presence of seams and cracks, the water hole not being level with the ground, etc. Accordingly, Powell (2005) In a research, it was concluded that 70% of the injuries caused by falling on the ground were due to an unsuitable surface (asphalt) and 75% of these areas had dangerous objects (glass, pebbles, etc.) (Powell *et al*., 2005).

Privacy component

This component was examined with 17 questions, which included materials such as separation of different lands, creating a suitable distance between the lands and the surrounding objects, non-interference of parking places for bicycles, motorcycles, and cars, etc. Considering that in the three investigated areas, the average security score of Harims is 2.46 (less than average) So we conclude that the safety status of outdoor sports spaces in all public high schools of Mashhad is low on average and there is no difference between the districts. In order to prevent children from entering the territory outside the sports area, the short distance between the fields and the adjacent walls has been mentioned In the research conducted, it is pointed out that the playgrounds are not separated from each other, there is no proper fence to prevent children from entering the territory outside the sports area, and the distance between the fields and the adjacent walls is small The researcher's observations of the schools showed that not all the fields have a suitable security distance from the fields and surrounding objects, the equipment of two sports are located in the same field, the parking area of the cars interferes with the privacy of the fields, the direction of the cars in addition to being clear Absence is not separated from the land, the land is a place where people travel and the construction facilities in some schools interfere. Accordingly, Akik (2004) concluded in Turkey: 83.3% of the fields are next to the street, 60% of the playgrounds do not have fences or barriers to keep children from entering the street, and only 12.5% of the fields has a separation in terms of the age of the users (Akik *et al*., 2004).

Component of the walls

This component was examined with 9 questions, which included things such as the strength of the walls adjacent to the ground, whether the walls are at their appropriate height, etc. Given that in three areas The average safety score of the walls is 2.46 (less than average), so we conclude that the safety condition of the walls of the outdoor sports spaces in all the public high schools of Mashhad is low in terms of the average. With an average of 2.85, they are different and have a lower safety level compared to non-privileged (3.10) and semi-privileged (3.07) areas. The conducted research indicates the presence of sharp edges, unprotected windows, and lack of security for construction facilities adjacent to the lands. The researcher's observations of the schools showed that in some schools, the building columns adjacent to the ground are edged, the building facilities adjacent to the ground lack proper protection The height of the wall around the sports area is not suitable in order to prevent the ball from leaving the ground. In this regard, Filan's research (2001) showed that students aged 5-9 were injured in 20% of cases due to the presence of inappropriate platforms and coverings (Filan *et al*., 2001.)

Components of supplies and equipment

This component was examined with 24 questions, which included items such as selecting supplies and equipment based on existing standards, daily examination and checking, discarding used and old equipment, and their appropriateness in terms of the number and age of students, etc. Considering that the average safety score of the fields in the three investigated areas is 3.15 (above average), we conclude that the safety condition of outdoor sports

facilities and equipment in all public high schools of Mashhad is average to high. There is no difference in this regard between the regions.

According to the researcher's observations in most schools, the materials used in the equipment are of average quality, the goalposts are fixed in place, there were less sharp edges on the equipment, and the equipment is suitable for the age and number of students is, worn out equipment is used less But in most places, the poles do not have proper covering and the used nets are not of high quality. In the report presented by Tinthorth (2001), between 1990 and 2000 in the United States of America, there were 147 deaths among students under 14 years of age, of which 56 cases (82%) were related to equipment and play equipment and 31 cases (20%) It has been related to falling and tripping (Tintworth *et al*., 2001).

component of sanitary services

This component was examined with 12 questions and included things such as the proportionality of the number of services with the number of students, the proportionality of the height of the toilets with the students, the strength of the walls, the presence of sufficient light in the services, etc Considering that in all regions the average score of sanitary facilities is 3.65 (more than average), so we conclude that the safety condition of sanitary facilities of open sports spaces in all public high schools of Mashhad is high in terms of average, which in further investigation, Toki's test It shows that the privileged areas with an average of 3.83 are different and have higher safety compared to the two non-privileged areas (3.55 and semi-privileged (3.45). According to the researcher's observations, in terms of the ratio of the number of sanitary facilities to the number of students, the condition of the sports facilities is good, but in terms of the distance between the facilities and the sports facilities, Zzouli (2007) stated in a research: In 84.4% of schools, the height of toilets and 62.5% of drinking fountains was proportional to the age of students, in 37.8% of schools, the number of toilets was proportional to the number of students, in 80% of schools The number of toilets was proportional to the number of students, in 56.3% of schools the number of drinking fountains is proportional to the number of students (Zezoli *et al*., 2017).

Component of medical equipment and relief

This component was examined with 7 questions and included items such as the presence of a first aid box, ease of access to it, the presence of a room for treatment, the presence of a telephone, etc Considering that the average safety score of medical equipment and aid is 2.71 (lowest average), we conclude that the safety status of medical equipment and aid in outdoor sports spaces in all public high schools of Mashhad is low in terms of average, and in further investigation, the test Toki shows that the privileged areas with an average of 3.00 are different and have high safety compared to the non-privileged (2.50) and semi-privileged (2.50) areas. According to the observations of the researcher, the schools are in a good condition in terms of being equipped with a first aid box, ease and access to it, as well as an available telephone, but in terms of instructions for the use of rescue equipment, the existence of a room for rescue and warning sirens in the situation They are not good. Accordingly, Zare (2013) in a research in the central province emphasized the inadequacy of first aid facilities (75.2%) (Zare *et al*., 2013).

Conclusions

In this research, 42 sports spaces of schools in different areas were evaluated in terms of safety and from different angles. From the results of this research and other researches, it can be concluded that the safety condition of sports spaces is inappropriate. Among all the safety components, the research showed that except for the average component of equipment and supplies, the other components have a below average average. However, it should be noted that even an unsafe item may lead to a lot of life and financial losses. Be but common sense requires that

with a few measures, it is possible to eliminate the dangerous cases in safety components based on the following suggestions and solutions:

1-In the field safety component, the most important thing is related to the existence of sufficient space for the students' activities, which must be predicted before the construction of the sports space. The water holes must have a cover and the same level as the playgrounds, the fields must be repaired so that they do not have pebbles and fluff, there is one entrance for each pair of fields.

2-In the privacy component, the distance between the privacy of each sport and the surrounding objects must be observed, gardens and trees must be at a sufficient distance from the ground, the parking area for teachers' cars, motorcycles and bicycles is outside the sports area of students and has a path. separate and if they are one with the fields, they are separated from each other by fences, the ban on the movement of non-athletes into the field should be observed, try to draw lines for each sport to be visible according to the rules of the same field.

3-In the component of the walls, the columns adjacent to the sports space should have no sharp edges, the walls should have a suitable height in order to prevent the ball from leaving the sports space, the building facilities adjacent to the ground should have proper protection, the lamps and breakable appliances adjacent to the space have protection.

4-In the equipment component, the gate posts should have a soft cover and the covers should be checked every once in a while to ensure that they are healthy, the safety instructions for the use of the tools and equipment should be written next to or on them, the tools and equipment To be purchased with quality, the equipment and play equipment should be without extra frills and bulges.

5-In the bathroom component, these services should be as far as possible from the sports area, the mirrors in the restrooms should be stable enough, there should be a toilet fountain for every 40 people and a water faucet for every 45 people. If available, the walls are covered with resistant materials up to a height of one meter.

6-In the component of medical and relief equipment, try to consider a separate place in sports spaces for the purpose of treating the injured, write instructions on how to use medical equipment next to it, and alarm sirens to inform about the occurrence of floods, fires, etc. ... to be installed in spaces.

Conflict of interests

No conflict

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