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A survey of risk management practices in public and private swimming pools in khorasan Razavi

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Abstract

Background: The purpose of the present research was to study the conditions of risk management and risk management operations in swimming pools of Khorasanrazavi Province.

Materials and Methods: The research method was descriptive-survey. The population of the research included all swimming pool managers of the province and the sample consisted of those managers who held swimming tournaments in their pools, overall 80 managers (male and female). Three questionnaires were used as research material: Risk Management Questionnaire, Risk Management Operations Questionnaire, and a questionnaire including objective variables. The reliability coefficient of the questionnaires was computed using Kuder-Richardson formula ($\alpha = 0.87$). Descriptive statistics were used to analyze data.

***Results and Discussions*:** there is a significant difference between the two types of management in risk identification ($p = 0.000$), assessment ($p = 0.000$), and control ($p = 0.000$). Also, there is a significant difference between males and females in managing risks ($\rho=0.000$) and risk management operations in public and private swimming pools ($\rho=0.000$).

Conclusion: The results revealed that these swimming pools did not enjoy proper risk management conditions and a significant difference was observed between genders in managing risk operations. Moreover, a significant difference was observed between various stages of risk management in public and private swimming pools. Based on the findings of the present study, managers of swimming pools must acquire fundamental knowledge of risk management and sports law so as to make swimming pools a safe place for all swimmers.

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Introduction

Risk is an essential attribute of sports and even the safest programs can never prevent accidents and injuries (Lhotsky, 2006). It is expected of the managers by law to make loss and risk management plans to ensure a secure place for all participants in sports activities (Eizadi, 2008).These days sport is regarded as a huge business and industry at both professional and recreational levels (Carroll, 2006).

Meanwhile, water sports are of the most popular sport activities played both indoors and outdoors. Water sports have created golden opportunities for employment in universities, public and private schools, parks, social service centers, military bases, health clubs, hospitals, and service organizations (Fawcett, 2005).Risk management emerged due to human, legal, and political needs. Risk management in sports is a responsibility for identification of methods for dealing with potential threats which can negatively affect sport events (Ammon, 1993; Ammon, 2005; Hsiao, 2005).

Among water sports, swimming is very much popular among general public. During summertime, millions of people spend their holidays in swimming pools, water recreation centers, beaches, and lakes. Sport and recreational organizations are faced with a broad range of risks. Risk management plans must be administered among customers, employees, and the organization. A proper general policy entails good security and appropriate risk management plans. Risk management must be a part of the training of employees in any sport or recreation center (Parks, 1998).

Risk management was first taken into consideration in industries and it took quite a long time before sport managers paid attention to this issue. Examining its sport aspect before the 60's did not reveal much information about risk management. Some issues related to safety, commitments, and legal obligations were discussed, yet no attention was given to the specific difficulties of sport industry. Each year, thousands of participants and spectators are harmed during sport events and recreational activities. Before 1980's, most participants were injured during sport events. Risk management was a reaction against risks through anticipating damages and developing ways of reducing the occurrence of such damages or decreasing their financial impact. Risk management was first introduced into sports and recreations in the mid 70's. The focus of attention of risk management in sports and recreations is reducing risks or injuries in sport establishments and facilities. The most prevalent risks or injuries are those imposed on customers that may lead to lawsuits and managers of sport or recreation establishments must try to decreases such risks (Styles; 2002; Girvan, 1993; Koozechian, 2009).

In the 21 stcentury, risk management became closely related to sport industry and many attempts were made to reduced amages and losses due to lack of attention toward risks (Lhotsky, 2006). Regarding risk management insports,there are three major reasons for developing its plans which are outlined as follows:

1. The number of lawsuits has increased in the world.
2. Law-makers and courts have been increasingly concerned with providing secure and risk-free environments for spectators and participants.
3. Nowadays, governments are no longer exempt from lawsuits of those injured in sport events. Thus by providing an efficient and secure environment, business owners can decrease lawsuits and increase the appeal for their activities. An effective risk management must identify risk factors and lawsuits and present effective solutions and recommendations for dealing with them (Lhotsky, 2006).

In the contemporary age, risk management has gained special significance due to lawsuits and the necessity to provide security for customers, and below we point out to some of the anticipated actions signifying the importance of risk management (Eizadi, 2008):

1. Revealing explicitly the consequences of lawsuits.
2. Educating for risk management and providing a secure environment.
3. Introducing risk management as a key factor in designing sport and recreation establishments.
4. Professional preparation for managing risks.
5. Developing more exhaustive risk management plans.
6. Requesting for certificate of employment in activity plans.

What follows are the areas over which risk managers of sports and public facilities are supervising:

(1) Developing systematic educational plans,
(2) Constructing simple, yet informative signs addressing establishment policies to swimmers,
(3) Documenting the issues in order to decrease responsibility,
(4) Eliminating perilous and unimportant activities,
(5) Monitoring the entire establishment and equipment,
(6) Ensuring sufficient and proper supervision,
(7) Ensuring that all employees are trained and competent,

(8) Making plans for training an educated staff in order to treat injuries and face any accident,

(9) Preparing medical emergency plans,

(10) Designing and administering plans for emergency evacuation,

(11) Preparing reports for all cases of injuries and dismissing the blameworthy (Harwell, 2003).

Koozechian (2009) studied risk management operations in public and private swimming pools and came to the conclusion that there is no significant difference between the types of management (whether public or private) in identification and control of risks; yet there is a significant difference between the types of management in assessing risks. They also concluded that there is a significant relationship between age and risk management stages. Further, no significant relationship was observed between experience and risk management operations (Koozechian, 2009).

Investigating the conditions of risk management in football stadiums, Doosti (2008) came to the conclusion that these stadiums were not enjoying a proper management of risks. Based on the results, he suggested that stadiums must acquire fundamental knowledge regarding risk management and sports law in order to make stadiums more secure (Doosti, 2007). Harwell (2003) found in his research that each risk management plan has its own specific properties. He regarded evident skills in risk management as the ability to influence others, technical expertise in financial risk management, preventive skills, and creativity (Harwell, 2003). Lhotsky (2006) came to the conclusion that there is hardly any relationship between personal characteristics and risk management operations. The findings revealed that the capacity of stadiums is highly related to risk management operations. Proper risk management actions were better carried out in larger stadiums than smaller ones (Lhotsky, 2006). Styles (2002) came to the conclusion that large establishments with numerous users had the most incidents. Moreover, mostly part-time employees and BSc students were working in these establishments. Managers of recreation centers indeed had included risk management plans in their establishment policies in order to decrease legal and financial risks, but the findings revealed that improper administration of these plans led to many incidents. The results also revealed that these managers had not provided necessary consultations and caveats regarding the risks (Styles, 2002).

Hsiao (2005) came to the conclusion that managers of public aquatic centers were more willing than private managers to obtain medical records of participants. Also public managers were less interested incontrolling the establishment than mangers of private centers. Male managers gave more significance to medical records and physical examination of participants prior to using the establishment and its equipment incomparison to female managers (Hsiao, 2005).

Slack (2004) found in his research that supervision proceedings of trainers with high educational degrees were better than those trainers having less education (Slack, 2004).The present research is a survey among managers of swimming pool regarding risk management in swimming pools of Khorasanrazavi Province, aiming to find the answer to the following questions:

- Do the managers have risk management plans?
- How is risk management operations administered in swimming pools?
- Is there a significant relationship between different types of management and risk management stages?

Materials and Methods

The present research is applied research with respect to its purpose and from methodological viewpoint, it is descriptive-survey carried out as field study. 80 male and female managers were included in the sample.

The population of the research consisted of the managers of public and private swimming pools of Khorasanrazavi Province, totaling 80 males and females.

The materials included three questionnaires: Risk Management Questionnaire (42 questions) adapted from the research work of Lhotsky, Risk Management Operations Questionnaire (50 questions) adapted from the research work of Hsiao, and a questionnaire regarding objective variables. The Risk Management Operations was assessed by experienced professors and taking into consideration the socio cultural conditions of the region, 45 questions were chosen and its reliability coefficient was computed to be 0.85 (Koozechian, 2009).

Moreover, Kuder-Richardson formula was used in order to assess the reliability of the Risk Management Questionnaire. Kuder-Richardson method (a measure of internal consistency) emphasizes on the consistency of items or parts that make up a test. Using Kuder-Richardson formula, the reliability coefficient of this questionnaire ($\alpha = 0.87$) was deemed to be acceptable (Doosti, 2008).

Descriptive statistics were used to organize the collected data into frequency, means, percentages, and computation of central indexes presented in

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tables. The required data were collected in person and were analyzed using SPSS 18 and Excel as well as t-test and Pearson's correlation coefficient.

Results and Discussions

The findings of the research are presented in three sections: description of personal characteristics of swimming pool managers, description of indices related to risk management in swimming pools, and risk management operations.

Table 1. Frequency distribution of the population based on experience of managers.

Experience	Frequency	Percentage
Less than 2 years	18	17
3-5 years	30	37
6-10	20	26
More than 10 years	12	20

Table 2. Relative frequency distribution of respondents' degrees as well as their fields of study.

Degree			**Field of Study**		
Diploma	Associate's Degre	BSc	MSc or higher	Physical Education	Other
14%	16%	50%	7%	16%	63%

In order to investigate the conditions of risk management in swimming pools of Khorasanrazavi Province, 10 risk management indices were used of which 7 indices were related to swimming pools. These indices are: standard operating procedures, presence of risk managers in swimming pools, checklist(s) for inspection, strategies against illegal ticket selling, insurance of swimmers against incidents, forms for documentation of incidents and injuries, and proper signs and guidelines in swimming pools.

Table 3. Frequency distribution of indices related to risk management conditions in swimming pools.

Indices	**Positive Answers**	**Negative Answers**
Standard Operating Procedures	17%	71%
Risk Managers	14%	81%
Checklist(s) for Inspection	26%	78%
Strategies against Illegal Ticket Selling	31%	72%
Insurance of Swimmers	29%	69%
Documentation Forms	32%	58%
Proper Signs and Guidelines	28%	64%

There is a significant difference between the two types of management in identification, assessment, and controlling risk.

Table 4. Comparing risk identification, assessment, and control between public and private swimming pool managers.

Source of Variance	**Degree of Freedom**	**T Value**	**P Value**
Risk Identification	70/131	4/245	/000
Risk Assessment	70/616	4/82	/000
Risk Control	73/342	5/57	/000

Considering table 4, there is a significant difference between the two types of management in risk

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identification (p = 0.000), assessment (p = 0.000), and control (p = 0.000).Hypothesis 2: There is a significant difference between male and female managers of public and private swimming pools in managing risks.

Table 5. Comparing risk management operations administered by male and female managers of public and private swimming pools.

Source of Variance	Degree of Freedom	T Value	P Value
Risk Management by Males and Females	49/426	-4/047	/000
Risk Management Operations in Public and Private Swimming Pools	71/33	5/171	/000

Considering table 5, there is a significant difference between males and females in managing risks (ρ=0.000) and risk management operations in public and private swimming pools (ρ=0.000).

Conclusion

Considering the data from the research, 63% of swimming pool managers were educated in fields other than physical education. In other words, only 16% of managers were educated in physical education which is inconsistent with Lhotsky's results (2006). This finding indicates that one possible reason why sport managers were not familiar with risk management operations in swimming pools was lack of a physical education degree. In the field of physical education and sport sciences, students pass courses such as management of sport establishments and sports law (both as optional courses). In these courses of study, students learn issues such as conditions of holding tournaments and how to ensure security of participants and spectators in sport establishments. Thus, the graduates of physical education are generally more acquainted with these notions and methods for dealing with security and risk management and the managers who are educated in the field of physical education generally apply better risk management and safety plans in sport establishments. Considering the data from the research, 50% of managers being studied had less than 5 years of experience as swimming pool managers which is inconsistent with Lhotsky's results (2006). This finding suggests that there is not much stability in swimming pool management. This lack of stability and the presence of political managers instead of managers specialized in physical education is perhaps another reasons why managers do not pay enough attention to safety and risk issues which are inherent parts of sports, in particular water sports. As we stated in the sections above, swimming pools did not have a proper condition in most given indicesof risk management. We discuss these in turn. Standard operating procedures: considering the data from the research, 71% of respondents stated that there are no standard operating procedures for risk management in swimming pools, which implies that managers must provide some procedures in this regard. Educating the staff and holding seminars on risk management in swimming pools are effective solutions for managers. Risk managers in swimming pools: almost 80% of respondents stated that there is no such person as a risk manager in swimming pools. The notion of risk management is newly introduced in sports of Iran and has not been very much taken into consideration. Thus, there must be educational courses and risk managers must be subject to such trainings so that in near future we will be able to employ such managers in swimming pools. Checklist(s) for inspection: 78% of respondents stated that there are no checklists for inspecting important different parts of swimming pools, electronic devices, and mechanical gadgets. Strategies against illegal ticket selling: 72% of respondents stated that no strategies have been devised against illegal ticket selling in black markets. Generally, any kind of irregularity or chaos in ticket selling will disturb the mental peace of swimmers. Insuring swimmers against incidents: 69% of respondents stated that swimmers were not insured. One of the fundamental necessities of risk management is to provide insurance for all swimmers. Paying attention to this issue will decrease possible lawsuits against managers and officials of swimming pools. Forms for documenting incidents and injuries: 88% of respondents stated that there are no documentation forms in swimming pools. Keeping a record of incidents and maintaining it enables managers to be more prepared for preventing possible incidents and to take preventive actions. Proper signs and guidelines in swimming pools: 74% of respondents stated that there are no proper signs and guidelines in swimming pools which are necessary for preventing and controlling incidents. Risk management is not just obeying organization's rules and regulations. An analysis of incidents reveals that

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most of these incidents were due to lack of risk management in accordance with regulation and that the rules themselves were not proper and effective with respect to risk-related factors. Organizations that go beyond the limit and legally face potential risk factors may be able to deal with many of such incidents by improving their management and performance, thereby prevent the occurrence of risks (Seidler, 2006). The problem we currently face in Iran is lack of attention toward critical risk factors and that only short-term superficial actions has been taken in this regard, and we observe that the sport system of the country lacks a scientific, systematic, and all-embracing risk management plan and the evidence for such a claim can be found innumerous regrettable accidents that have occurred in swimming pools. According to the findings of the research, there is a significant difference between risk management in public and private swimming pools. The findings revealed that public swimming pools usually do not have sufficient employers for monitoring customers in comparison with private swimming pools. The water quality of private swimming pools is always desirable, while public swimming pools do not pay much heed to such issues. Sense of responsibility is greater in private swimming pools in comparison with private ones and the former pay more attention to the injured participant. Managers of private swimming pools oblige their employers to report any incident of lesions or injuries. The findings of the present research showed that there is no significant difference between management of public and private swimming pools. Considering the fact that the average monitoring in private swimming pools was higher than that of the public ones, we can say that managers of private swimming pools have relatively had a better performance in scheduling of equipment and building maintenance. Further, the findings revealed that private managers had a better performance in preventing customers from using the swimming pool and the equipment at the time of maintenance. They also had a better performance with regards to educating safety issues and providing risk warning forms. The findings revealed that there is a significant difference between genders in managing risk operations. Female mangers had a better performance in risk management operations than males. Identification and control of risks was better in females than males which is inconsistent with the results of Hsiao. According to the results, many of the stages of risk management were better performed in private swimming pools, which is due to many reasons such as differences between the private sector and the public sector in determining strategies, objectives, etc. For the sake of customer attraction and profitability, private swimming pools increase the quality of their services and apply various safety plans to decrease damages and losses. Insufficient manpower was one of the administrative obstacles of risk management in public swimming pools. Considering the fact that a larger number of people visit public swimming pools, manpower should be employed proportional to the number of participants. Moreover, the results revealed that few managers had devised risk management plans. Some of the strategies that can be taken to familiarize managers with risk management plans are educating them and holding seminars. A sport establishment with a poor structure, plan, and design may lead to problems for managers and participants. An improper design of the establishment may restrict plans such as maintenance and supervision, and more importantly, it may make participants prone to perilous conditions. These factors can lead to losses and injuries (Shahmansouri, 2006). Risk management is of utmost importance for sport managers and physical education trainers; these individuals must play an inhibitory role against potential detrimental risks. They must regularly inspect the equipment and facilities before participants use such facilities in order to find any faulty or corroded equipment (Carroll, 2006). Risk management is a complicated phenomenon, especially in aquatic centers, and its principal goal is to anticipate and evaluate risk factors. Risk management in water sport and recreation centers aims to anticipate potential factors that lead to incidents and simultaneously to provide necessary strategies for controlling those factors and consequently, provide a peaceful and pleasurable environment for all participants, whether they are employees, spectators, or participants.

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