



Evaluating Risk Management Practices in Fitness Centers: Perspectives from Facility Managers

Ali ERASLAN¹ , Zafer ÇİMEN¹ 

¹ Gazi University, Faculty of Sports Sciences, Ankara, Turkey

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Abstract

This study aimed to evaluate the risk management practices in fitness facilities in Turkey from the perspective of facility managers. The study was designed as a general survey research, one of the quantitative research methods. The study participants comprised 263 managers working in Turkey's three most prominent cities. As a data collection tool, "The Risk Management Scale in Health and Fitness Facilities" developed by researchers was used. As a result, it is seen that the managers have high scores for risk management practices in their facilities in all sub-dimensions. Their facilities' highest risk management practices are in member services, structure, and design, then policy, respectively. It is determined that there are positive and high-level relations between the most policy-oriented practices of facility managers regarding risk management, followed by their practices towards structure and design and member services.

Keywords: Risk Management, Fitness Facility, Fitness Industry, Fitness Manager, Exercise Professionals

INTRODUCTION

People's interest in exercise is increasing daily with their physical, mental, and social gains and awareness (Eraslan et al., 2020). It is because evidence-based studies are generally known, such that physical inactivity doubles health risks, and obesity and hypertension shorten life expectancy (Penedo & Dahn, 2005). On the other hand, there are many studies (Blair et al., 1996; Prentice et al., 2004; Ashe et al., 2009; Kuijpers et al., 2013) showing that participation in regular physical activity can be effective in the prevention and control of many chronic diseases and other adverse health conditions (Centers for Disease Control [C.D.C.], 2004).

The studies carried out in the last ten years show that people's interest in exercise has significantly contributed to the growth of the health and fitness industry globally. The revenue generated by this industry has exceeded 87.2 billion dollars (International Health and Racquet Sports Association [I.H.R.S.A.], 2018), and it is predicted that the revenue the industry will generate in 2023 will reach an estimated 113.16 billion dollars (Parasannan, 2018).

As such, the health and fitness sector, which has an essential place in the sports sector, offers its services in facilities of different sizes and characteristics. Although different in size and characteristics, these businesses try to create an effective, safe, and attractive environment that encourages exercise for health. However, consumers who want to become a member to receive service from these facilities thoroughly evaluate quality factors such as the programs

offered by the facility, the personnel providing the service, and the opportunities offered by the facility before making their final decision (Çimen, 2002; MacIntosh & Law, 2015). In addition to all these elements, it is one of the factors that consumers emphasize in evaluating the activities that they will join or participate in situations that may pose a risk, such as wounding and injury, which are inherent in sports or exercise (Carroll, 2011).

Therefore, it has become necessary for facilities and facility managers in the fitness sector to provide a safe exercise environment to their members by working on situations that may pose a risk of being preferred in an ever-increasing competitive environment (Bates, 2008). It can be said that businesses that do not fulfill this requirement or do not show sensitivity will lead to a loss of members and image, which will cause severe problems for the institution's future (Barrett & Baldry, 2003).

Today, the issues and legal regulations for preventing such problems are straightforward, and fitness facilities must fulfill these obligations due to their work. For example, failing to warn participants in a situation where they may be injured -even if the risk is low- is the facility's neglect. Therefore, fitness facilities should be aware of potential hazards, adopt risk management practices, and make long-term plans (Carroll, 2011). This plan includes the necessary arrangements to protect the institutions' assets by making a profit, planning the resources and activities necessary to minimize the possible losses at the lowest cost, and the management and control processes of the institution (Çağırğan, 1995).

The state supports many scientific studies and legal standards, especially in America, Australia, and Germany, regarding risk management, which is vital for the fitness sector and is essential in general management. However, the same cannot be said for this situation in Turkey. Moreover, there is no risk management issue in the relevant instructions that fitness facilities in Turkey must implement. From this point of view, this research aims to evaluate the risk management practices in fitness facilities to examine the risk management practices necessary for the safety of exercise participants and the future of fitness facilities in Turkey.

Risk Management in Fitness Facilities

The development of physical activity/exercise habits worldwide is considered necessary in terms of public health due to its benefits in reducing or eliminating the effects of the potential harms of sedentary living (Blair, 2009; Trost et al., 2014; Kruk, 2014). For example, in developed countries where the elderly population is higher than the young population, obesity and type 2 diabetes are quite common. For this reason, in these countries, both public and

private organizations support participation in physical activity/exercise, and it is seen that severe time and resources are spent by making efforts to enable people to participate in physical activity/exercise. These efforts and the reasons mentioned earlier have significantly impacted the increasing interest in fitness facilities.

However, with the increasing interest in fitness facilities, the number of participants daily has increased the problems experienced in these facilities, and the need for security policies and procedures has become more critical than before. For example, it was reported that the most common problem in fitness facilities is physical injuries (Eickhoff-Shemek et al., 2009; Leahy, 2020) and that approximately 7 million medical incident practices originating from fitness facilities are made to the U.S. National Center for Injury Prevention and Control each year. In order to prevent and manage such problems, the primary purpose of these needs is to minimize the risks of health problems or other potential risks that may arise during physical activity, especially for individuals who are elderly or have specific health problems (such as cardiovascular diseases) (American College of Sports Medicine [A.C.S.M.], 2012). The secondary aim is to prevent potential liability loss (such as negligence) for the organizations that fitness facility managers and employees represent (Eickhoff-Shemek, 2008).

In order to fulfill these purposes, risk management definitions have begun to be made in the fitness sector. Some definitions in the literature are as follows:

- “To check in advance all kinds of negative situations that are sudden, unpredictable, unusual and may be encountered due to negligence” (Ammon, 1993).
- “Establish a management strategy to gain more control over the legal uncertainty that can harm a sports business” (Wong and Masteralexis, 1998).
- “A course of action designed to reduce the risk and loss of sport participants, spectators, employees, management and the organization” (Spengler et al., 2009)
- “Policies and procedures to reduce the likelihood of an event (injury or death) that could result in a risk to the life of an employee, member or user; practices and systems that businesses follow to reduce or limit their exposure to potential liability and financial loss” (Finch et al., 2009; A.C.S.M., 2012).

As can be understood from these definitions, “the main goal of a fitness facility is to protect the safety and health of its members/participants, and risk management is the most important thing that the organization must do to achieve this goal” (Sharp, Moorman and Claussen, 2010).

It is because in the 21st century, public management and individuals do not tolerate even minor neglect by any sports organization in terms of risk management, and the said organization, sports manager, or the entire event is held responsible for this negligence. Therefore, sports managers are expected to take all necessary preventive measures. For those who do not fulfill these obligations, the number of sports-related lawsuits in the courts is constantly increasing. In many cases that appear as a rule rather than an exception, relatively high amounts of financial compensation are encountered (Appenzeller, 2005).

Risk management becomes an inevitable component of the organizational mission in fitness facilities that do not want to encounter such adverse situations. For this reason, a good risk management plan should be established in fitness facilities, which includes practices that prevent risks (such as pre-activity screening and equipment maintenance) and are considered as an unexpected event response system (i.e., emergency response systems) (Sekendiz, 2011; Kim, 2014; Gray et al., 2015).

While the risk mentioned above management plan is created in fitness facilities, what is required from activity areas in fitness facilities, as in other areas, is identifying potential risk areas (source, event, or impact) that could be a source of risk (Çobanoğlu & Sevil, 2015) such as creating a safe environment, lighting level, and cleanliness, should be the first step in managing risks.

METHOD

Research Model

This study was designed as a general survey research, one of the quantitative research methods, and it is aimed to examine the risk management practices of the managers of fitness facilities operating in the biggest cities of Turkey (Istanbul, Ankara, and Izmir).

Data collection tool

The "The Risk Management Scale in Health and Fitness Facilities" developed by Eraslan and Çimen (2022) was used as a data collection tool in this study. The collection tool consists of 3 dimensions and 24 items. The dimensions of scale are titled as: "construction and design (8 items)", "policy (8 items)", "member services (8 items)". The questionnaire is on a five-point Likert scale ranging from 1 – strongly disagree to 5 – strongly agree.

Research group

The population of this research consists of managers working in fitness facilities operating in Istanbul, Ankara, and Izmir. In order to define the population, first of all, fitness facilities operating in Istanbul, Ankara, and Izmir are listed based on the data of the Turkish Bodybuilding, Fitness, and Arm Wrestling Federation (T.B.F.A.W.F.). In line with the information obtained, it has been determined that 828 fitness facilities were operating in 2020, of which 617 are in Istanbul, 112 are in Ankara, and 99 are in Izmir. After determining the number of fitness facilities in the population, the sample size chart specified by Çıngı (1994) was used to increase the study's external validity by generalizing the results obtained from the sample to the population and to reduce the sampling error.

It was determined that the sample number representing the population was represented by at least 263 people with a probability of 95%. For the sample to represent the population qualitatively and quantitatively, a selection was made based on the stratified sampling method called quota sampling, which is among the non-random sampling methods. Within the scope of the research, provinces with fitness facilities were considered a stratum, and each province was included in the study in line with its weight in the population.

When the distribution of the 828 administrators that make up the population according to the provinces determined as the stratum is examined, it is determined that 75% of the managers work in Istanbul, 14% in Ankara, and 12% in İzmir. In this direction, 263 people participated within the research scope, and the managers' distribution according to some characteristics is shown in Table 1.

Table 1. Distribution of the managers participating in the research and the facilities they work according to some characteristics

Characteristics	Variables	Categories	f	%
Some characteristics of managers	Gender	Female	118	44.9
		Male	145	55.1
	Age	18-25	39	14.8
		26-35	201	76.4
		36+	23	8.7
	Educational Level	Bachelor and lower	194	73.8
		Graduate	69	26.2
	Position in the current facility	Top-level manager	68	25.9
		Mid-level manager	27	10.3
		Lower-level manager	168	63.9
	Working time in the sector	1-5 years	54	20.5
		6-10 years	150	57.0
		11 years and above	59	22.4
	Working time at current job	Less than one year	54	20.5
		1-3 years	31	11.8

Some characteristics of the facilities	City	Over three years	178	67.7
		İstanbul	196	74.5
		Ankara	36	13.7
		İzmir	31	11.8
	Size	Smaller than 500 m ²	62	23.6
		500-1000 m ²	68	25.9
		1000 m ² and more	133	50.6

As seen in Table 1 is examined, it is seen that 44.9% (n=18) of the managers participating in the study are female and 55.1% (n=145) are male. It was determined that the majority of the managers were in the age range of 26-35 (76%, n=201), single (68%, n=179), lower-level managers (64%, n=168) and had a bachelor's degree or lower (74%, n=194).

When the working time of the managers in the sector is examined, it is seen that 20.5% of the managers (n=54) have been working in the sector for 1-5 years, 57.0% (n=150) for 6-10 years, 22.4% (n=59) for 11 years or more. In addition, most managers (68%, n=178) have been working at the current facility for three years or more.

As seen in Table 1 is examined, 23.6% (n=62) of the facilities included in the research are smaller than 500 m², 25.9% (n=68) are between 500-1000 m², and 50.6% (n =133) are greater than 1000 m².

FINDINGS

The scale was applied to 263 managers to examine the risk management practices of fitness facility managers in Turkey from various perspectives. In order to determine the reliability of the answers given by the managers, the Cronbach alpha reliability coefficient was calculated. Each of the dimensions was found to be internally consistent. Cronbach's alpha coefficients ranged from 0.852 to 0.926 for this study.

What level are the risk management practices of managers of fitness facilities operating in İstanbul, Ankara, and İzmir?

The descriptive statistics for the answers given by the managers in order to determine the risk practices of the managers of the facilities participating in the research are shown in Table 2.

Table 2. The calculated descriptive statistics on risk practices of fitness facility managers

Dimensions	N	The Lowest	The Highest	$\bar{X}$	S _x
Structure and design	263	15.00	40.00	31.35	5.83
Policy	263	10.00	40.00	30.62	7.20
Member services	263	23.00	40.00	35.65	4.57
Risk management (total)	263	62.00	120.00	97.62	15.02

When the information in Table 2 is examined, it was determined that the mean scores of the managers of the fitness facilities participating in the research for risk management practices in the dimension of structure and design were calculated as 31.35 (± 5.83), the mean scores for the risk management practices in the policy dimension as 30.62 (± 7.20), the mean scores for the risk management practices in the member services as 35.65 (± 4.57), and the mean scores for the risk management practices in their facilities in general as 97.62 (± 15.02).

It was determined that the managers of fitness facilities operating in Istanbul, Ankara, and Izmir had the highest risk management practices for their facilities in member services, structure and design, and policy. Risk management practices were high in all sub-dimensions and in general.

Table 3. T-test on unrelated measures calculated for the risk management practices of fitness facility managers according to the education level of the managers.

Dimensions	Educational level	N	$\bar{X}$	S_x	t	sd	p	d'
Structure and design	Bachelor or lower	194	32.66	5.36	6.611	261	0.000*	0.82
	Graduate	69	27.65	5.52				
Policy	Bachelor or lower	194	32.15	6.99	6.194	261	0.000*	0.77
	Graduate	69	26.30	5.96				
Member services	Bachelor or lower	194	36.61	4.14	6.115	261	0.000*	0.76
	Graduate	69	32.94	4.66				
Risk management (total)	Bachelor or lower	194	101.43	13.84	7.613	261	0.000*	0.94
	Graduate	69	86.90	12.97				

*p<0.05

When the information in Table 3 is examined, it is seen that risk management practices for structure and design show a significant difference according to the education level of the managers ($t(261)=6.611$; $p<0.05$). When the mean scores were examined, it was determined that the managers with a bachelor's degree or lower (32.66 ± 5.36) had higher risk management for structure and design than those with a graduate degree (27.65 ± 5.52). The calculated Cohen d effect size shows that the effect of the difference is high.

It was determined that policy-oriented risk management practices showed a significant difference according to the education level of the managers ($t(261)=6.194$; $p<0.05$). When the mean scores were examined, it was determined that the managers with a bachelor's degree and lower (32.15 ± 6.99) had higher policy-oriented risk management than those with a graduate degree (26.30 ± 5.96). The calculated Cohen d effect size shows that the effect of the difference is high.

It was determined that risk management practices for member services differed significantly according to the education level of the managers participating in the research ($t(261)=6.115$; $p<0.05$). When the mean scores were examined, it was determined that the managers with a bachelor's degree or lower (36.61 ± 4.14) had higher risk management for member services than those with a graduate degree (32.94 ± 4.66). The calculated Cohen d effect size indicates that the effect of the difference is high.

Finally, in Table 3, it was determined that risk management practices, in general, showed a significant difference according to the education level of the managers whose opinions were taken within the scope of the research ($t(261)=7.613$; $p<0.05$). When the mean scores were examined, it was determined that the managers with a bachelor's degree or lower (101.43 ± 13.84) had higher risk management than those with a graduate degree (86.90 ± 12.97). The calculated Cohen d effect size shows that the effect of the difference is high.

Table 4. One Way ANOVA and Kruskal Wallis tests calculated the risk management practices of the managers of fitness facilities according to the position level of the managers

Dimensions	Position level	N	$\bar{X}$	S_x	Difference test	sd	p	η^2
Structure and design	Top-level manager	68	29.82	5.90	$F=3.412$	2 (262)	0.034*	0.03
	Mid-level manager	27	31.19	4.62				
	Lower-level manager	168	31.99	5.89				
Policy	Top-level manager	68	29.18	7.65	$X^2=3.454$	2	0.178	----
	Mid-level manager	27	31.00	4.70				
	Lower-level manager	168	31.14	7.30				
Member services	Top-level manager	68	34.44	5.00	$X^2=14.271$	2	0.001*	0.04
	Mid-level manager	27	37.96	3.82				
	Lower-level manager	168	35.77	4.36				
Risk management (total)	Top-level manager	68	93.44	15.79	$X^2=7.193$	2	0.001*	0.03
	Mid-level manager	27	100.15	10.28				
	Lower-level manager	168	98.90	15.10				

* $p<0.05$

When the information in Table 4 is examined, it is seen that there is a significant difference between the risk management for the structure and design according to the position levels of the managers ($F(2,262)=3.412$; $p<0.05$). According to the multiple comparison Bonferroni test, it was determined that the scores of those working as lower-level managers (31.99 ± 5.89) were significantly higher than those of top-level managers (29.82 ± 5.90).

It was determined that policy-oriented risk management did not show a significant difference according to the managers' positions in the current facility ($X^2=3.454$; $p>0.05$). In other words, it was determined that the policy-oriented risk management practices of the facility's lower, middle, and top-level managers are similar.

The risk management practices for member services differed significantly according to the positions of the managers in the fitness facility participating in the research ($X^2(2)=14.271$; $p<0.05$). As a result of the Mann-Whitney test, the risk management practices scores of middle-level managers for member services (37.96 ± 3.82) were found to be significantly higher than the top (34.44 ± 5.00) and lower level (35.77 ± 4.36) managers.

It was determined that there was a significant difference in risk management practices in general according to the duties of the managers in the fitness facility ($X^2(2)=7.193$; $p<0.05$). As a result of the Mann-Whitney test, it was determined that the risk management practices of the lower-level managers (98.90 ± 15.10) were significantly higher than those of the top-level level (93.44 ± 15.79) managers.

Table 5. One Way ANOVA test calculated on risk management practices of managers according to the size of fitness facilities

Dimensions	Facility size	N	$\bar{X}$	S_x	F	sd	p
Structure and design	Smaller than 500 m ²	62	31.40	5.44	1.292	2 (262)	0.276
	500-1000 m ²	68	32.25	5.39			
	1000 m ² or larger	133	30.86	6.19			
Policy	Smaller than 500 m ²	62	29.00	8.35	2.081	2 (262)	0.127
	500-1000 m ²	68	31.24	6.64			
	1000 m ² or larger	133	31.06	6.84			
Member services	Smaller than 500 m ²	62	36.69	4.19	2.234	2 (262)	0.109
	500-1000 m ²	68	35.53	4.82			
	1000 m ² or larger	133	35.23	4.57			
Risk management (total)	Smaller than 500 m ²	62	97.10	16.28	0.396	2 (262)	0.673
	500-1000 m ²	68	99.01	13.77			
	1000 m ² or larger	133	97.14	15.10			

* $p<0.05$

In line with the information in Table 5, structure and design ($F_{(2,262)}=1.292$; $p>0.05$), policy ($F_{(2,262)}=2.081$; $p>0.05$), and member services ($F_{(2,262)}=2.234$; $p>0.05$) risk management practices of the managers did not show a significant difference according to the size of the facility. Similarly, it was determined that the risk management of the managers in general did not show a significant difference according to the size of the fitness facilities ($F_{(2,262)}=0,396$; $p>0,05$).

The Pearson correlation coefficient was calculated to determine the relationships between the dimensions of risk management practices of managers in fitness facilities participating in the research. The results are shown in Table 6.

Table 6. Relationships between risk management practices of managers in fitness facilities

Dimensions	Values	Structure and Design	Policy	Member services	Risk management
Structure and design	r	1	.727**	.469**	.879**
	p		0.000	0.000	0.000
	N	263	263	263	263
Policy	r	.727**	1	.500**	.914**
	p	0.000		0.000	0.000
	N	263	263	263	263
Member services	r	.469**	.500**	1	.726**
	p	0.000	0.000		0.000
	N	263	263	263	263
Risk management (total)	r	.879**	.914**	.726**	1
	p	0.000	0.000	0.000	
	N	263	263	263	263

*p<0.05; **p<0.01

As seen in Table 6, it was determined that there is a positive and high-level relationship between managers' general risk management and their risk management practices for structure and design ($r=0.879$; $p<0.01$), policy ($r=0.914$; $p<0.01$) and member services ($r=0.726$; $p<0.01$). It was determined that there are positive and high-level relations the most with the risk management practices of the managers for policy, followed by the risk management practices for the structure and design and the member services, respectively.

DISCUSSION

This section discusses the findings obtained from the data regarding the risk management practices of fitness facility managers.

Considering the scores for the structure and design, policy, member services, and general risk management practices of the fitness facility managers participating in the research, there are managers with low and very high ones. The calculated average values show high-risk management scores in the fitness facilities where the managers work.

Elements related to the structure and design for risk management in fitness facilities (especially those that may cause injury) directly affect the facility's operation (A.C.S.M., 2012). Because the structure and design dimension means meeting the required standards of the health and safety targets of the facility (Sekendiz, 2011). Looking at the literature, the most critical issues that are emphasized in terms of risk management are the suitability of the general structure and the availability of sufficient space (area-member ratio) within the facility for the use of members (Eickhoff-Shemek et al., 2009). However, although the T.B.F.A.W.F., Special

Physical Education and Sports Halls Instruction contains the required maximum dimensions for areas such as locker rooms and restrooms, more information about the area-member ratio must be provided. In this study, facility managers' high scores on risk management practices related to structure and design can be explained by the significant investments made in our country, Europe's fastest-growing fitness market. In addition, when the studies on fitness facilities in Turkey are examined, it is seen that the dimensions related to the structure and design dimensions affect customer satisfaction (Özkan, 2013; Yıldız et al., 2016; Yıldız et al., 2018; Altun et al., 2020).

According to the literature on risk management, it is seen that leading health and fitness organizations (A.H.A., I.H.R.S.A., A.C.S.M., etc.) recommend that all facilities should have risk management and emergency policies (Balady et al., 1998)—furthermore, the A.C.S.M. Health and Fitness Facility Standards and Guidelines include a section on "Risk Management and Emergency Policies" (Tharrett et al., 2007). All health and fitness facilities should have a risk management policy to ensure that emergencies are handled safely, efficiently, and effectively (Balady et al., 1998). Having these policies (provided they are implemented and renewed regularly) can serve as a "good defense" to reduce legal liability for health and fitness facilities (Eickhoff-Shemek et al., 2009).

A study conducted in Australia by Sekendiz (2014) stated that although most health and fitness facilities have a written emergency plan, these plans need to be regularly renewed and provide emergency preparedness practices (Sekendiz et al., 2014). However, having a better emergency policy dramatically impacts the facility and the community (Sekendiz et al., 2018).

It was determined that the managers of fitness facilities operating in Istanbul, Ankara, and Izmir had the highest risk management practices for their facilities in member services, structure and design, and politics. Risk management scores were high in all sub-dimensions and in general.

In a study conducted by Sekendiz (2011), it is seen that the highest risk management practices in health and fitness facilities belong to the "programs," and the lowest risk management practices belong to the "emergency plans" sub-dimension. The items in these dimensions are similar to the "member services" and "policy" dimensions, respectively, in the "Risk Management in Health and Fitness Facilities Scale". Therefore, the results of the study conducted by Sekendiz (2011) show parallelism with this study. The fact that the highest risk management practices belong to the member services dimension can be explained by the fact

that member services in fitness facilities are among the factors that positively affect the membership renewal intention (Ferrand et al. - Florence, 2010; Wei et al., 2010), and therefore managers give more importance to this factor.

Investigation of Risk Management Practices of Fitness Facilities Managers According to Education Levels

It was determined that there was a significant difference in the risk management practices of the facilities regarding the structure and design, member services, and policy according to the education level of the managers in the fitness facilities. Similarly, it was figured out that there was a significant change in risk management practices in general according to the education level of the managers. It was determined that managers with undergraduate and lower education risk management practices were significantly higher than managers with postgraduate education.

Risk perception is an element affected by direct and indirect experiences. Direct experience is internal (to experience a hazardous event personally), while indirect experience is external (such as media and education level) (Kasperson et al., 1988; Halpern-Felsher et al., 2001). Accordingly, some studies explain that indirect experience, including education, affects risk perception and understanding and awareness of risk-related warnings (Wachinger et al., 2012). Moreover, indirect experience can play an essential role in recalling previous personal experiences or pre-existing indirect experiences (Shaw et al., 2004). As a result, in this study, the good risk management practices in managers with undergraduate and lower education facilities can be explained by the fact that the level of education included in the indirect experience affects the risk perception.

Investigation of the Risk Management Practices According to the Position Levels of Fitness Facilities Managers

It was determined that risk management practices for member services showed little difference according to managers' positions in fitness facilities. In other words, the risk practices of lower, middle, and top-level managers in the facility for member services are similar. According to the managers' positions, there was a significant difference between structure and design, policy-oriented risk management practices, and risk management practices in general. It was found that top-level managers at the facility had significantly higher levels of structure and design and risk management practices than lower-level managers. Similarly, top-level

managers' policy-oriented risk management practices were significantly higher than middle and lower-level managers.

As the management level rises, the responsibility of the manager also increases (Şimşek & Çelik, 2018; Erdoğan, 2018). Similarly, studies show a positive relationship between responsibility and risk perception (Slovic, 1987; Rickard, 2014). In other words, the responsibility for risk management from the manager's point of view and the risk perceptions in different management levels also vary. Therefore, the difference in the scores given to risk management practices by the managers working in fitness facilities can be explained by the difference in risk management perceptions arising from the responsibility they undertake.

Investigation of the Risk Management Practices According to the Size of the Facility where the Fitness Facilities Managers Work

According to the size of the fitness facility, it was determined that the risk management practices of the managers for the facility's structure and design, member services, and policy were similar. Similarly, it was determined that the risk management practices of the managers in general showed little difference according to the size of the facility. The reason for this similarity can be explained by the necessity of applying similar risk management standards as the health and fitness facilities opened in Turkey are based on the same regulation regardless of their surface area. The risks that may be encountered in the facilities (large or small) are similar (A.C.S.M., 2012).

The correlation coefficient was calculated to determine the relationship between the risk management practices of the managers in the fitness facilities operating in Istanbul, Ankara, and Izmir with the sub-dimensions. As a result of the calculation, it was determined that there were positive and high-level relations between the risk management practices of the managers and the policy-oriented practices, followed by the practices for structure and design and member services.

In a study conducted by Sekendiz (2011) in Australia, "having a risk management plan" and "equipment maintenance" are among the most critical risk management practices for managers in fitness facilities. These elements are related to the "policy" dimension in the Risk Management in Health and Fitness Facilities Scale. Therefore, in the study conducted by Sekendiz, it is seen that the most critical factor determining risk management practices is policy. The reason for this is that -as seen in the literature- the essential element for a successful risk

management practice is policy, and managers should focus on this element first (Schneider et al., 2008; R.M.G.C.S.O., 2010; Dugalic, 2011; Kim, 2014).

As a result, it has been observed that the managers of fitness facilities operating in Istanbul, Ankara, and Izmir generally have high scores for risk management practices in their facilities in all sub-dimensions. Health and fitness facility managers have found that their facilities' highest risk management practices are in member services, structure, design, and policy. It has been determined that there are positive and high-level relations between the most policy-oriented practices of fitness facility managers regarding risk management, followed by their practices towards structure and design and member services.

REFERENCES

- Altun, M., Birtürk, A. & Soykan, A. (2020). Türkiye ve dünyada fitness salonu müşteri beklentileri: sistematik bir derleme. *Çanakkale Onsekiz Mart Üniversitesi Spor Bilimleri Dergisi*, 3(1), 34-47.
- American College of Sports Medicine. (2012). *A.C.S.M.'s Health/Fitness Facility Standards and Guidelines* (4th Edition). The U.S.A.: Human Kinetics, 30-40.
- Ammon, R., Jr. (1993). Risk and game management practices in selected municipal football facilities. Unpublished doctoral dissertation, University of Northern Colorado.
- Appenzeller, H. (2005). *Risk Management in sport, issues and strategies* (2nd Edition). North Carolina: Carolina Academic Press, 12-20.
- Ashe, M.C., Miller, W.C., Eng, J.J. & Noreau, L. (2009). Older adults, chronic disease and leisure-time physical activity. *Gerontology*, 55(1), 64-72. <https://doi.org/10.1159/000141518>
- Balady, G.J., Chaitman, B., Driscoll, D., Foster, C., Froelicker, E., Gordon, N., Pate, R., Rippe J. & Bazzarre, T. (1998). Recommendations for cardiovascular screening, staffing, and emergency policies at health/fitness facilities. *Circulation*, 97(22), 2283-2293. <https://doi.org/10.1161/01.CIR.97.22.2283>
- Barrett, P. & Baldry, D. (2003). *Facility management* (2nd Edition). United Kingdom: Blackwell Science Ltd., 8-48.
- Bates, M. (2008). *Health fitness management* (2nd Edition). Champaign (I.L.): Human Kinetics, 287-353.
- Blair, S.N. (2009). Physical inactivity: the biggest public health problem of the 21st century. *British Journal of Sports Medicine*, 43(1), 1-2.
- Carroll, R. (2011). *Risk management handbook for health care organization*. The USA: John Wiley & Sons, 1-27.
- Centers for Disease Control. (2001). *Effects of physical activity on health and disease: a report from the Surgeon General*. Centers for Disease Control. The U.S.A., 9.
- Çağırğan, M. (1997), *Risk yönetimi*, Yüksek Lisans Tezi, İstanbul Üniversitesi Sosyal Bilimler Enstitüsü, İstanbul.
- Çingir, H. (1994). *Örnekleme Kuramı*. Beytepe: Hacettepe Üniversitesi Fen Fakültesi Basımevi.
- Çimen, Z. (2002). Spor hizmetlerinde toplam kalite boyutları. *İstanbul Üniversitesi Spor Bilimleri Dergisi*, 2(1), 37-48.
- Çobanoğlu, H.O., Sevil, G. (2015). Sporda risk yönetimi: üst düzey futbolcuların risk değerlendirmeleri üzerine bir araştırma. *Celal Bayar Üniversitesi Beden Eğitimi ve Spor Bilimleri Dergisi*, 8(2), 1-15.
- Dugalic, S. (2011). Risk management in sports and sports organizations. *Sport – Science and Practice*, 2(3), 67-78.
- Eickhoff-Shemek, J. (2008). The legal aspects: building a comprehensive risk management plan. *A.C.S.M.'s Health & Fitness Journal*, 13(1), 35-38. DOI: 10.1249/FIT.0b013e31819173a9

- Eickhoff-Shemek, J., Herbert, D.L. & Connaughton, D. (2009). *Risk management for health/fitness professionals: legal issues and strategies*. Baltimore, MD: Lippincott Williams & Wilkins, p. 37.
- Eraslan, A., Alvrdu, S. & Bıyıklı, T. (2020). Fitness ve wellness eğitmenliği: Kavramsal bir yaklaşım. *Gazi Beden Eğitimi ve Spor Bilimleri Dergisi*, 25(2), 127-139.
- Eraslan, A., & Çimen, Z. (2022). Sağlık ve Fitness Tesislerinde Risk Yönetimi Ölçeği: Geçerlik ve Güvenirlik Çalışması. *Spor Bilimleri Araştırmaları Dergisi*, 7(1), 132-148. <https://doi.org/10.25307/jssr.1055834>
- Ferrand, A., Robinson, L. & Valette - Florence, P. (2010). The intention to repurchase parado: a case of the health and fitness industry. *Journal of Sport Management*, 24, 83-105. <https://doi.org/10.1123/jsm.24.1.83>
- Finch, C., Donaldson, A., Otago, L. & Mahoney, M. (2009). What do users of multi-purpose recreation facilities think about safety at those facilities? *Sport Health*, 27, 31–35.
- Gray, S.E., Keyzer, P., Norton, K., Joachim, D., Sekendiz, B., Coyle, I. & Finch, C. F. (2015). The role of equipment, the physical environment and training practices in customer safety within fitness facilities: the perspectives of fitness industry employees. *Journal of Fitness Research*, 4(2), 26–33.
- Halpern-Felsher, B.L., Millstein, S.G., Ellen, J.M., Adler, N.E., Tschann, J.M. & Biehl, M. (2001). The role of behavioral experience in judging risks. *Health Psychology*, 20(2), 120-126. <https://doi.org/10.1037/0278-6133.20.2.120>
- Kasperson, R.F., Renn, O., Slovic, P., Brown, H.S., Emel, J., Goble, R., Kasperson, J.X. & Ratick, S. (1998). The social amplification of risk: A conceptual framework. *Risk Analysis*, 8(2), 177-187. <https://doi.org/10.1111/j.1539-6924.1988.tb01168.x>
- Kim, S. (2014). An analysis of risk management practices and legal considerations in South Korean club sports. Doctoral Thesis, University of New Mexico Health Exercise and Sports Sciences, Mexico.
- Kruk, J. (2014). Health and economic costs of physical inactivity. *Asian Pacific Journal of Cancer Prevention*, 15(1), 7499–7503. <https://doi.org/10.7314/APJCP.2014.15.18.7499>
- Kuijpers, W., Groen, W.Gg., Aaronson, N.K. & Harten, W.H.V. (2013). A systematic review of web-based interventions for patient empowerment and physical activity in chronic diseases: relevance for cancer survivors. *Journal of Medicine Internet Research*, 15(2), 37. [10.2196/jmir.2281](https://doi.org/10.2196/jmir.2281)
- Leahy, G. (2020). Tactical fitness research: TSAC report. *the NSCA's Quarterly*, 55(6), 1-12.
- MacIntosh, E. & Law, B. (2015). Should I stay or should I go? Exploring the decision to join, maintain, or cancel a fitness membership. *Managing Leisure*, 20(3), 191–210. <https://doi.org/10.1080/23750472.2015.1025093>
- Özkan, S.E. (2013). Türkiye’deki fitness merkezlerinde hizmet kalitesi beklentilerinin incelenmesi, Yüksek Lisans Tezi, Bahçeşehir Üniversitesi Sosyal Bilimler Enstitüsü, İstanbul.
- Parasannan, A. (2018). *Global Fitness and Recreational Sports Centers Market Research*, Allied Market Research. Web: [https://www.alliedmarketresearch.com/fitness-and-recreational-sports-center-](https://www.alliedmarketresearch.com/fitness-and-recreational-sports-center-market) market adresinden 6 Kasım 2019’da alınmıştır.
- Penedo, F. J. & Dahn, J. R. (2005). Exercise and well-being: a review of mental and physical health benefits associated with physical activity. *Current Opinion in Psychiatry*, 18(2), 189-193.
- Prentice, R.L., Willet, W.C., Greenwald, P., Alberts, D., Bernstein, L., Boyd, N.F., Byers, T., Clinton, S.K., Fraser, G., Freedman, L., Hunter, D., Kipnis, V., Kolonel, L.N., Kristal, B.S., Kristal, A., Lampe, J.W., McTriernan, A., Milner, J., Patterson, R.E., Potter, J.D., Riboli, E., Schatzkin, A., Yates, A., Yetley, E. (2004). Nutrition and physical activity and chronic disease prevention: research strategies and recommendations. *Journal of the National Cancer Institute*, 96(17), 1276-1287.
- Risk Management Guide for Community Sports Organizations (R.M.G.C.S.O.) (2010). Legacies Now, Canada.
- Schneider, R.C., Stier, W.F., Kampf, S., Haines, S.G. & Gaskins, B.P. (2008). Factors affecting risk management of indoor campus recreation facilities. *Recreational Sports Journal*, 32, 114-133. <https://doi.org/10.1123/rsj.32.2.114>
- Sekendiz, B. (2011). *An investigation of risk management practices in the health and fitness facilities in Queensland: minimizing the likelihood of legal liability*. Doctoral Thesis, Bond University Faculty of Health Sciences and Medicine, Queensland.

- Sekendiz, B. (2014). Implementation and perception of risk management practices in health/fitness facilities. *International Journal of Business Continuity and Risk Management*, 5(3), 165–183.
- Sekendiz, B., Gass, G., Norton, K. & Finch, C. (2014). Cardiac emergency preparedness in health/fitness facilities in Australia. *The Physician and Sports Medicine*, 42(4), 14–19. <https://doi.org/10.3810/psm.2014.11.2087>
- Sekendiz, B., Norton, K., Keyzer, P., Dietrich, J. & Coyle, I.R. (2018). Emergency preparedness in fitness facilities: bridging the gap between policy and practice. *International Journal of Business Continuity and Risk Management*, 8(1), 71-85.
- Sharp, L. A., Moorman, A. M., & Claussen, C. L. (2010). *Use of waivers and exculpatory clauses. Sports law: a managerial approach*, 2nd ed. The U.S.A.: Holcomb Hathaway Publishers.
- Shaw, R., Kobayashi, K.S.H. & Kobayashi, M. (2004). Linking experience, education, perception and earthquake preparedness. *Disaster Prevention and Management*, 13(1), 39-49. <https://doi.org/10.1108/09653560410521689>
- Slovic, P. (1987). Perception of risk. *Science*, 236(4799), 280–285. DOI: 10.1126/science.3563507
- Spengler, J.O., Anderson, P.M., Connaughton, D.P. & Baker, T.A. (2009). *Introduction to sports law*. Champaign, IL: Human Kinetics.
- Şimşek, M.Ş. & Çelik, A. (2018). *Yönetim ve organizasyon* (20. Baskı). Konya: Eğitim Yayınevi.
- Tharrett, S. J., McInnis, K. J. & Peterson, J. A. (eds.) (2007). *ACSM's health and fitness facility standards and guidelines*, 3rd ed., Human Kinetics, Champaign, IL.
- Trost, S.G., Blair, S.N. & Khan, K.M. (2014). Physical inactivity remains the greatest public health problem of the 21st century: evidence, improved methods and solutions using the “7 investments that work” as a framework. *British Journal of Sports Medicine*, 48(3), 169–170. <http://dx.doi.org/10.1136/bjsports-2013-093372>
- Yıldız, K., Polat, E., Sönmezoğlu, U. & Çokpartal, C. (2016). Fitness merkezi üyelerinin algıladıkları hizmet kalitesinin belirleyicileri üzerine bir analiz. *Niğde Üniversitesi Beden Eğitimi ve Spor Bilimleri Dergisi*, 10(3), 453-464.
- Yıldız, S.M., Duyan, M. & Günel, İ. (2018). Hizmet kalitesinin müşteri memnuniyeti üzerine etkisi: fitness merkezlerinde ampirik bir uygulama. *Spor Bilimleri Araştırmaları Dergisi*, 3(1), 1-8. <https://doi.org/10.25307/jssr.344971>
- Wachinger, G., Renn, O., Begg, C. & Kuhlicke, C. (2012). The risk perception paradox- implications for governance and communication of natural hazards. *Risk Analysis*, 33(6), 1049-1065. <https://doi.org/10.1111/j.1539-6924.2012.01942.x>
- Wei, P.C., Hung, H.C., Yang, H.C., Hsu, Y.J. & Ma, Z. (2010). Examination of influence of service quality on membership renewal in fitness centers in San Francisco Bay Area. *Journal of Service Science*, 3(2), 13-24. <https://doi.org/10.19030/jss.v3i2.366>
- Wong, G. M., & Masteralexis, L. P. (1998). *Legal principles applied to sport management. Principles and Practice of Sport Management*, Aspen, Gaithersburg, MD.

CONTRIBUTION RATE	EXPLANATION	CONTRIBUTORS
Idea or Notion	Form the research hypothesis or idea	Ali ERASLAN Zafer ÇİMEN
Design	To design the method and research design.	Ali ERASLAN Zafer ÇİMEN
Literature Review	Review the literature required for the study	Ali ERASLAN Zafer ÇİMEN
Data Collecting and Processing	Collecting, organizing and reporting data	Ali ERASLAN Zafer ÇİMEN
Discussion and Commentary	Evaluation of the obtained finding	Ali ERASLAN Zafer ÇİMEN
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Statement of Ethics Committee		
This study does not require ethics committee approval.		



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