
Assessing perceived risk management and satisfaction in university student's sports facility experience: A cross-sectional study

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ABSTRACT

This study examines the intricate relationship between perceived risk management and student satisfaction concerning the sports facilities offered by a university. As universities strive to create conducive environments for physical activities, the effectiveness of risk management strategies becomes crucial in ensuring student safety and contentment. A survey involving 330 university students was conducted, employing well-established tools to gauge their perceptions of risk management and satisfaction with the sports facilities offered. The collected data was subjected to correlation analysis, revealing a statistically significant and robust positive relationship ($r = .793^{**}$, $p < 0.01$) between perceived risk management and student satisfaction. This result underscores the importance of effective risk management in enhancing students' overall satisfaction with the sports facilities provided by the university. However, while the study establishes a compelling correlation, it is vital to acknowledge that other factors could also influence student satisfaction. This study contributes to the understanding of how risk management practices correlate with student experiences within university sports facilities. This study provides valuable insights for institutions aiming to optimize student satisfaction and well-being. Further research could delve into specific risk management strategies that students value most and explore their optimal integration for maximum impact on satisfaction levels.

Keywords: Perceived risk management, satisfaction, sports facilities, university student's

INTRODUCTION

In contemporary society, the pursuit of a healthy lifestyle has taken centre stage, with physical activity being a key component of individual well-being. Public and private sports facilities play a pivotal role in promoting physical activity, thereby contributing to the overall enhancement of health and quality of life (Lemes, Gaya, Sadarangani, Aguilar-Farias, Rodriguez-Rodriguez, Martins & Cristi-Montero 2021; Tjønnedal, & Nilssen, 2019). However, Woodman, MacGregor and Hardy (2020), mentioned that as individuals engage in various sports and recreational activities, they are exposed to certain inherent risks that necessitate effective management strategies. Addressing these risks not only ensures the safety and security of facility users but also significantly influences their level of satisfaction.

Effective risk management stands as a cornerstone in ensuring a safe and gratifying sports facility experience for users (England & Painting, 2022). Perceived risk management is a critical aspect

of various industries, encompassing domains such as finance, healthcare, and product consumption (Kuhlicke, Seebauer, Hudson, Begg, Bubeck, Dittmer & Bamberg, 2020; Sánchez-Cañizares, Cabeza-Ramírez, Muñoz-Fernández & Fuentes-García, 2021). It revolves around the perception individuals hold about potential uncertainties and hazards associated with a specific activity, product, or service. Within this realm, understanding how individuals perceive and manage risks has gained prominence due to its implications for decision-making, behaviour, and overall satisfaction. This literature review aims to provide a comprehensive overview of past research on perceived risk management, focusing on its definitions, dimensions, influencing factors, and its role in different contexts. Perceived risk management is rooted in the concept that individuals evaluate the potential negative outcomes or uncertainties associated with a particular choice or action (Richter & Wilson, 2020). It encapsulates the subjective assessment of the likelihood and severity of adverse consequences and influences decision-making processes. This perception is influenced by personal characteristics, experiences, and the information available to individuals (Yost & Cheng, 2021).

The Australian Sports Commission has incorporated risk management into the realm of sports and leisure, with key components now encompassing budgeting, scheduling, insurance coverage, eligibility, equipment and facility oversight, contract administration, and other crucial responsibilities (Rana, Hoque & Jacobs, 2019). Concurrently, Oke, Adetoro, Stephen, Aigbavboa, Oyewobi and Aghimien (2023) noted that risk management involves proactive handling of the increasingly intricate business activities driven by scientific and technological advancements. Turyanitsya (2021) highlighted that sports activities characterized by indicators such as probability, alternatives, contradictions, dangers, and uncertainties give rise to sports-related risks. Through a comprehensive analysis and strategic implementation of risk management protocols, potential hazards and vulnerabilities are identified, mitigated, and minimized (Wijaya, 2021). This proactive approach contributes to an environment where users can confidently engage in physical activities without undue apprehensions about their well-being. Moreover, robust risk management strategies bolster the reputation of sports facilities, positioning them as responsible and reliable venues that prioritize user safety. This can be directly led to the customer satisfaction.

Kim, Lee and Kim (2020) stated that customer satisfaction within the context of sports facility utilization is intrinsically tied to effective risk management practices. The sense of security and trust that emanates from a well-structured risk management framework directly influences users' perceptions of the facility (Kim et al., 2020). When individuals feel that their safety is a priority and that potential risks have been acknowledged and addressed, their overall satisfaction increases. This positive perception extends to various dimensions, encompassing the quality of equipment, adequacy of safety measures, competence of staff, and the overall facility environment. A satisfied customer not only becomes a recurrent user but also serves as a potential advocate, positively influencing the facility's reputation through word-of-mouth (Pauli, Martin & Greiling, 2023; Rabah, Dandis, Eid, Tiu Wright, Mansour, & Mukattash, 2023). Customer satisfaction stands as a cornerstone of business success, influencing loyalty, repeat business, and overall brand reputation (Hawkins & Hoon, 2019). It encompasses the extent to which consumers' expectations and needs are met through a product or service. Concurrently, risk management plays a crucial role in mitigating uncertainties and potential adverse outcomes. This literature review aims to provide a comprehensive overview of past research on customer satisfaction and its interplay with risk management, highlighting how effective risk management strategies can enhance customer satisfaction and loyalty. Paulose and Shakeel (2022) mentioned that customer satisfaction refers to the positive emotional response and evaluation that stems from the perception that a product or service meets or exceeds expectations. It is influenced by various factors, including product quality, customer service, pricing, convenience, and overall experience. Universities have transformed into pivotal entities within communities, playing a guiding role and exerting influence over social development (Carayannis & Morawska-Jancelewicz, 2022). These institutions not only elevate service standards but also provide students with higher education opportunities to enrich their knowledge, along with offering comprehensive facilities for their utilization (Williamson, 2019). Moreover, students stand as one of the most critical strategic pillars for universities, emphasizing the heightened importance of their satisfaction within a competitive landscape where the recruitment of new students is paramount (Javed & Alenezi, 2023). Zaid and Patwayati (2021) stated that the symbiotic relationship between customer satisfaction and risk management is evident in their

reciprocal influence. Effective risk management strategies not only safeguard customers from potential harm but also enhance their overall experience, leading to greater satisfaction and loyalty.

The term "sports facility" encompasses a broad spectrum of spaces ranging from outdoor recreational areas like golf courses to indoor arenas, domes, and single-purpose or multi-use stadiums (Glebova & Desbordes, 2022). Furthermore, sports facilities, often referred to as fixed structures primarily utilized for athletic training, maintenance, repair, and health purposes, demand consideration of safety concerns by governing authorities (Liu, Mkongwa & Zhang, 2021). The recognition of a sports facility aligns with the functions it serves, including facilitating fitness and physical activity (O'Connor, Alfrey & Penney, 2022). Traditional exercise and recreational pursuits often took place in open areas such as public parks, fields, cycling lanes, and pedestrian paths (Parra-Ovalle, Miralles-Guasch, & Marquet, 2023; Rivera, Timperio, Loh, Deforche & Veitch, 2021). Evidently, community engagement was intricately linked to local sports facility development. Consequently, these facilities play a crucial role in promoting healthier lifestyles that encompass physical, mental, and emotional well-being. The construction of sports facilities demands significant financial investment, sometimes outweighing their benefits due to the substantial maintenance costs (Nikolaou, Konteos, Kalogiannidis & Syndoukas, 2023).

In contemporary terms, sports facilities are solid edifices complemented by adjacent flat spaces designed to facilitate sporting achievements and offer gratifying experiences to spectators during sporting events (Škoric, Mikulic & Barišic, 2021). Modern sports facilities, including football stadiums and versatile arenas, are increasingly incorporating commercial spaces, often leased to third parties, which contribute substantially to revenue generation. This strategic management approach encompasses maintenance coverage, insurance, and operational expenses (Bayle, Lang & Moret, 2020). The integration of risk management practices has become imperative to ensure the safety, satisfaction, and continued engagement of users and visitors. Effective risk management not only minimizes potential hazards but also enhances customer satisfaction, which in turn translates into loyalty, positive word-of-mouth, and financial growth. As the sports industry evolves, the role of sports facilities will continue to evolve, presenting new challenges and opportunities that demand innovative solutions, robust risk management strategies, and a deep understanding of the symbiotic relationship between facility design, user satisfaction, and community well-being.

This article delves into the intricate relationship between perceived risk management and customer satisfaction within the realm of sports facility utilization. By examining empirical evidence, case studies, and existing literature, we aim to elucidate the benefits of a well-structured risk management approach in fostering a safe and satisfying environment for users. Thus, the integration of effective risk management practices not only safeguards users from potential hazards but also serves as a catalyst for elevating overall customer satisfaction. A comprehensive understanding of this relationship is imperative for facility managers, stakeholders, and policymakers as they strive to create an environment that encourages active participation while prioritizing user well-being.

RESEARCH METHODOLOGY

Research design

This research employs a quantitative research design, employing a questionnaire-based survey to investigate the relationship between perceived risk management and student satisfaction concerning the sports facilities provided by the university. Data was collected from participants at UiTM Arau, Perlis, where there were a total of 938 FSR students, comprising 440 Diploma students and 498 Degree students. To determine the sample size, the researchers referred to the Sample Size Estimation Table by Krejcie & Morgan from 1970, which indicated a required sample size of 330 from the total population of 938 students. Consequently, the final sample size consisted of 330 respondents, evenly split between 165 male and 165 female participants (N= 330). Furthermore, the research instrument employed in this study comprised a total of 40 items, with 20 items adapted from Aznan, Jaffry Zakaria, Kassim, Ismail, Yusof and Kahar (2021) and another 20 items from Napitupulu, Rahim, Abdullah, Setiawan, Abdillah, Ahmar and Pranolo (2018). Participants were asked to rate these items using a Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

RESULTS

The descriptive analysis outcomes regarding respondent demographics, categorized by gender is presented in Table 1 below:

Table 1 Percentage of Demographic Separated by Gender

		Frequency	Percentage (%)
Gender	Female	165	50.0
	Male	165	50.0
	Total	330	100.0

Table 2 Items for Risk Management

No	Item	Mean	SD
1.	The fitness facility had provided the basic guidelines, rules, and regulations before entering the fitness facility.	3.92	.653
2.	The fitness facilities staff/employers recorded the client's temperature and observed symptoms such as cough and sore throat as a precaution for COVID-19.	3.87	.695
3.	The fitness facilities had practised good distancing between equipment and workout procedures for all activities and exercises provided	3.88	.736
4.	The fitness facilities sanitized all the equipment and each section that has been used by the customer regularly.	3.93	.700
5.	The fitness facilities' arrangement of equipment is easy to access.		
6.	The fitness facilities provided health pre-screening services for its users.	3.89	.699
7.	The fitness facilities regularly had maintenance on the equipment and facilities provided.	3.89	.723
8.	The fitness facilities used all types of social media platforms for promotion purposes.	3.94	.744
9.	The fitness facilities had given their best service quality even during the COVID-19 for the members/clients.	3.84	.767
10.	The staff/trainers/employers in the fitness facilities are professionally certified.	3.87	.768
11.	The staff/trainers/employees in the fitness facilities can give clear instructions during any activity/exercises performed.	3.89	.738
12.	The fitness facilities take serious action towards any complaints/reports/feedback from the client/customer.	3.93	.743
13.	The fitness facilities had provided an interview to determine the qualified staff/trainers/employers.	3.89	.738
14.	The fitness facilities provide a good salary and benefits to all the staff/trainers/employers.	3.87	.745
15.	The fitness facilities had provided an emergency procedure flow chart for the client/customer.	4.12	.662
16.	The fitness facilities staff/trainer/employer briefed the customer/client on possible risks for each activity/exercise.	4.07	.777
17.	The fitness facilities provided a secure emergency area for treating any light to moderate injury.	3.83	.895
18.	The staff/trainers/employers in the fitness facilities are provided with first aid certificates.	4.07	.800
19.	The fitness facilities provided a secure locker area with CCTV for the customer/client belongings.	3.90	.867
20.	The fitness facilities provided an online registration form for the new members.	3.83	.895

Table 3 Items for Satisfaction

No	Items	Mean	SD
1.	The fitness facility staff are visibly productive, hard-working, and professional.	3.92	.833
2.	The equipment and facilities provided are well maintained and satisfactory.	3.99	.834
3.	The cleanliness of high-visibility public areas, such as hallways and entrances, as observed, is clean at the beginning of the business day.	3.84	.908
4.	The total time taken to resolve cleaning complaints to staff is acceptable.	3.88	.894
5.	The fitness facilities operator provides convenient service to the customer	3.83	.895
6.	The process for ordering uncommon or special services for any physical activity from staff/trainers is extremely simple.	3.90	.867
7.	The fitness facilities' culture and emotional climate are generally positive and supportive.	3.90	.883
8.	There is no language barrier between the staff/trainer and the customer/client.	3.99	.819
9.	It is easy to communicate with staff/trainers.	4.07	.800
10.	I prefer to visit again.	4.05	.775
11.	I really recommend this fitness facility to my friends and family.	3.91	.774
12.	I am satisfied with the facilities provided	3.94	.804
13.	I am satisfied with the staff/trainer services	3.76	.950
14.	I am satisfied with the environment	3.81	.898
15.	The staff/trainer are prompt in answering any questions/doubt from the client.	4.01	.777
16.	I am overwhelmed with the classes and physical activity provided.	4.06	.777
17.	The fitness facilities staff/trainer understands my goals very well.	3.86	.859
18.	The spaces provided for classes and activities are wide and comfortable.	3.93	.870
19.	The security provided by the fitness facility is satisfactory.	4.04	.870
20.	I have no doubt that performing physical activity conducted by the staff/trainer.	4.00	.662

Table 4 Guildford Rule of Thumb (1973)

<i>r</i>	Strength of Relationship
<.2	Negligible Relationship
.2-.4	Low Relationship
.4-.7	Moderate Relationship
.7-.9	High Relationship
>.9	Very High Relationship

The Guildford Rule of Thumb was used in Table 4 to determine the strength of the relationship (1973). The researcher was able to determine the strength of the correlation between service quality provided and attendees' motivation to engage with the university's sports facilities using this rule of thumb.

Table 5 Correlation between Perceived Risk Management and Students' Satisfaction

		Students Satisfaction
Perceived Risk Management	Pearson Correlation	.793**
	Sig. (2-tailed)	<.001
	N	330

***. Correlation is significant at the 0.01 level (2-tailed).*

Table 5 presents a notable and meaningful finding that highlights a significant positive high correlation between perceived risk management and students' satisfaction when utilizing the university's sports facilities ($r = .793^{**}$, $p < 0.001$). Let's delve into a thorough analysis of these results while closely

connecting the discussion to the link between perceived risk management and satisfaction with the provided sports facilities.

DISCUSSION

The correlation coefficient of $r = .793^{**}$ indicates a substantial strength of the relationship between perceived risk management and student satisfaction. The positive sign of the correlation coefficient signifies that as perceived risk management increases, students' satisfaction with the sports facilities also tends to rise. This outcome is aligned with the notion that effective risk management practices can foster a safer and more enjoyable environment, which likely contributes to higher satisfaction among students using sports facilities. Perceived risk management encompasses measures taken by the university to ensure the safety, security, and overall quality of the sports facilities (Shaw, Sakurai & Oikawa, 2021). These measures might include safety protocols, maintenance routines, and staff training to prevent accidents, injuries, or any form of discomfort. The significant positive correlation implies that when students perceive these risk management efforts as effective and reliable, they are more likely to feel content and satisfied with their experiences in the sports facilities (King, McQuarrie, & Brigham, 2021; Moustakas & Robrade, 2022).

The strong statistical significance of the relationship ($p < 0.001$) reinforces the validity of the findings. It suggests that the observed association between perceived risk management and student satisfaction is unlikely to have occurred by chance. This finding is crucial because it underscores the importance of prioritizing risk management strategies within university sports facilities (Yasuda, Myoenzono, Takai, Toguchi, Tsunezumi, Kondo & Kamei, 2023). However, it's important to recognize that correlation does not imply causation. While the results strongly suggest a connection between perceived risk management and student satisfaction, it's also plausible that other variables not considered in this study could influence the observed relationship. For instance, factors like facility accessibility, variety of offered activities, and facility cleanliness could also impact student satisfaction (Wilkins, Hazzam & Ireland, 2022).

The result from this study indicates that the respondent is focusing on risk management, including safety provided by the university and sports facility operator, the result is probably influenced by the knowledge of the respondents as they are all from the Faculty of Sports Science and Recreation, where they are all exposed to the importance of safety and risk management and the possibility of risk occurrence during sports or physical activity. This is supported by past studies that the institution's initiatives in hosting diverse programs and courses related to risk management serve as a means to disseminate valuable information and awareness. This, in turn, contributes to enhancing students' satisfaction with the facilities, adding value to their experience (Ahmad, Salamuddin & Surat, 2021; Ahmad & Safuan, 2023).

CONCLUSION

In conclusion, sports facilities stand as dynamic and evolving entities that have transitioned from mere functional spaces to versatile hubs catering to various athletic, recreational, and commercial needs. The evolution of these facilities over time reflects the shifting priorities of society, from the pursuit of physical activity and fitness to accommodating modern entertainment and business endeavours. This transformation has been driven by a complex interplay of architectural innovation, technological advancements, and the growing demands of an increasingly health-conscious and engaged community.

Modern sports facilities not only provide a stage for athletic achievements and spectator enjoyment but also contribute significantly to revenue generation through the incorporation of commercial spaces. As sports facilities continue to adapt to the changing needs and preferences of their users, they simultaneously become mirrors of their unique cultural contexts and construction technologies. The designs of these facilities are increasingly universal, transcending regional characteristics and embracing global architectural trends. This universal appeal resonates with the diverse audience they attract, emphasizing the importance of creating spaces that resonate with people

from various backgrounds. Further research could delve into specific risk management strategies that students value most and explore how these strategies can be optimized for maximum impact on satisfaction levels. In the broader context, sports facilities play a crucial role in fostering healthier lifestyles providing spaces for physical activity, social interaction, and personal growth. They serve as catalysts for community engagement and unity, contributing to the overall well-being of individuals and societies.

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