

ORIGINAL ARTICLE



A Management Model for Sport Fields and Facilities of Thailand

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ABSTRACT

Background. Today, the trend of maintaining good health and exercise has become very popular in Thailand, but from the document studied by the researcher, many sports facilities were abandoned. Some were not ready to use, and others were damaged. **Objectives.** This research aimed to study the actual conditions and expected conditions of people who used the field services, the equipment, and the sports facilities in Thailand's sports field and facilities management under the supervision of local administrative organizations and create their management model. **Methods.** This study utilized mixed-method research. The quantitative phase was characterized by an initial quantitative step of data collection through the questionnaire with 420 participants by selecting through the Multi-Stage sampling method and analyzed with the descriptive statistic and a T-test. In the qualitative phase with the focus group interview research method, 11 experts in sports facilities used purposive sampling with semi-structured interviews. **Results.** The quantitative process identified the seven components of the management model of field equipment and sports facilities in Thailand consisted of 1) Property; 2) Service; 3) Technology; 3) Security; 4) Maintenance; 5) Support; system; and 6) Sustainable Management, and the result found a significant relationship between the actual conditions and expected conditions towards the seven components ($P < 0.05$). The qualitative part confirmed the quantitative findings. **Conclusion.** The considerable gap difference between the actual and the expectation of the customers created the awareness of the policymakers to change something in a good way for developing all dimensions in the sports facility in Thailand. Nevertheless, the result of this research with the POLC principle could be helpful for the benefit of those policymakers in the field.

KEYWORDS: *Sport Fields, Facility, Management.*

INTRODUCTION

The purpose of the NSDP Volume 6 was to have people at least 60% exercise and do sports to improve their life quality and encourage Thailand to promote sports for health and sports in the locality and international competition (1). The sports infrastructure development regarding establishing and improving sports fields and stadiums, sports equipment to serve training facilities, and sporting events at all levels, including the district, provincial, national, and international levels (2). Nevertheless, in the NSDP Volume 5 (2012-2016) strategy, it was

found that the overall plan was not successful according to the plan's target; only 26 out of 51 indicators met the target (1). In addition, when considering the sport for all strategies related to the entire national population, the evaluation result found that it could not be successfully driven (1). From the analysis of the causes and factors, it was found that the local community lacked a place to exercise, sports infrastructure to be used for exercising, doing sports, and recreation (3). However, the literature review found that some regional sports fields have been

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abandoned, others are damaged (4), and there still have been problems in using services and users' needs in many ways (5). Many places still lack standards and modern field facilities available on the sports field, especially the lighting and sound systems around the area. These issues caused insecurity for the service users (6). Some of the stadiums which were not well managed, accompanied by the management depending on government agencies without people's involvement, resulted in their depreciation (7). These concerns partly reduced people's interest in exercising and doing sports and subsequently affected the trust of those who use the service (8). Such earlier mentioned information led the researcher to acknowledge that despite a clear national sports development plan of Thailand, the operations involved in managing the sports fields and facilities are not standard, especially those of the local administration. Therefore, the researcher is interested in studying "A management model for sports fields and facilities of Thailand" to encourage people to turn their attention to their health and sports.

Most of the previous papers focused on many areas of this issue. For example, in the first one, "Kwon et al." found that the overlapping positions identified by both datasets are considered optimal locations for sports facilities (9). "Cieřlikowski et al." showed a few factors that significantly influence the management models adopted in sports in these cities (10). "Amaral et al." found the low participation of managers in tasks related to the Economic-Administrative Management area was identified (11). "Mamashli et al." found the impact of the three main dimensions, namely deployment of related technologies (modern antecedents), deployment of the management system (core components), and improvement of management culture (HSE) and its sub-dimensions on the health, safety, and environmental management system of sports facilities were confirmed (12).

The current study attempts to fill this gap in the literature by focusing on the actual conditions and the expected conditions of people who used the field services, the equipment, and the sports facilities to Thailand sports field and facilities management under the supervision of local administrative organizations, and to create their management model.

MATERIALS AND METHODS

Quantitative Study. This study utilized mixed-method research by using the quantitative analysis to study the actual and expected conditions of the people using sports fields and facilities in Thailand. The qualitative research to confirm the result from the quantitative and create a management model for sports fields and facilities in Thailand.

Participants. Four hundred twenty people completed the quantitative survey. The sample was comprised of 70 people from Krabi province, 70 people from the Chonburi province, 70 people from the Suphanburi province, 70 people from Buriram province, and 70 people from Srisaket province, and 70 people from Udonthani province. All were selected through probability sampling by Multi-stage sampling, which was as follows;

The six provinces were selected by the criterion of the Sports city prototype in Thailand, and the non-random selective base on convenience was used to collect the data easily.

The non-probability sampling by quota methods was used for defining the sample size, which was 70 samples per province, as shown in [Table 1](#).

Instrument. The researchers developed a questionnaire based on the previous literature. The survey consisted of the actual and expected conditions of the people using the services of sports fields, equipment, and sports facilities in Thailand. The final survey comprised 88 items. The content validity of this survey was determined through Item – Objective Congruence (IOC) (12). Furthermore, the reliability of the expectation was .99, and the actual and the expected condition was 99. (Cronbach's Alpha Coefficient) which was shown as the [Table 2](#). Questionnaires including 5 points of satisfaction and expectation which starts from the highest and the least.

Analysis. The quantitative data were analyzed through descriptive statistics, including frequency, mean, standard deviation, and pair sample t-test.

Qualitative Study. The 11 key informants included the sports fields administrators, the representative directly responsible for the sports field management, and the equipment and sports facilities under the supervision of the local administrative organization. Participants were again recruited using purposive sampling.

Procedures. The researchers discussed the findings from the quantitative process with 11 participants, then questioned the informants regarding the questions. The researcher has shown a few examples of the interviews conducted, with the code specified for each, as shown in Table 3. A semi-structured interview protocol guided the discussion in the focus group. Then, the inductive content analysis was used to analyze the qualitative data.

RESULTS

Quantitative Finding. Analyzing the actual conditions and the expected conditions of people who used the field services, the equipment, and

the sports facilities in Thailand sports field and facilities management under the supervision of local administrative organizations by using frequency, mean, standard deviation, and pair sample t-test.

From Table 4, it was found that the results of the comparative analysis of the actual and expected conditions of the people who used the Property, Service, Technology, Security, Maintenance, Support System, Environmental and sustainable management under the local administrative organization, and the result found a significant relationship between the actual conditions and expected conditions towards the seven components ($P < 0.05$).

Table 1. The Demographic Characteristics of Quantitative Research

Region	Krabi	Chonburi	Supanburi	Burirum	Srisaket	Udonthani
Population	473.000	1.535	0.848	1.57	1.47	1.56
Sample	70	70	70	70	70	70

Table 2. Cronbach's Alpha Coefficients for each Variable

Components	Actual	Expected
	Cronbach's Alpha	
Property	1.40	1.19
Service	0.84	0.98
Technology	1.26	1.12
Security	0.84	1.05
Maintenance	0.77	0.98
Support System	1.05	0.84
Environmental and Sustainable Management	0.77	0.77
Total	0.99	0.99

Table 3. Example of Interview Coding

	I = Interviewer, P = Participant	Unique Code
I	What is your opinion in terms of "The Management Process" toward the property component?	
P	Planning aspect: Regarding the conclusion of the group discussion, most experts commented on the definition of "stadiums and sports field" and that they should be defined clearly so as not to confuse "regarding the location of the stadium, public hearings, and public participation in the area should be added. The sports field design should be in accordance with the standards of the sport and the suitability and the local context and should be focused on serving all groups of people and providing a place to exercise with a variety of activities to meet the needs of the people. Organizing aspect: Regarding the conclusion of the group discussion, most experts commented that there should be a management structure that would be more comprehensive than assignments and should increase the involvement of the private sector in management. Leading aspect: With regard to the conclusion of the group discussion, the majority of experts commented that the administrators of the local administrative organization should realize the importance of exercise and sports policy including the promotion of activity and sports. Controlling aspect: With respect to the conclusion of the group discussion, the majority of experts commented that written words should be adjusted and there should be the follow up on the implementation of sports promotion.	5
I	What is your opinion in term of "The Management Process" toward the service component?	
P	Planning aspect: Relating to the conclusion on the group discussion, the majority of experts commented on words used. The sub-details in the service were covered and some experts commented that the service fee should not be included because a sports facility made for public service. While some experts commented that the service fee may be kept; the term may be adjusted. Organizing, leading, and controlling aspects: the experts suggested adapting the use of the term in a manner similar to Property management.	5

Table4. The Results of the Comparison Analysis between the Actual and Expected Condition

Actual and Expected Conditions	Actual Condition		Expected Condition		Paired Samples Test	
	\bar{x}	S. D	\bar{x}	S. D	t	Sig.
1.Property	2.80	0.79	4.39	0.65	-29.10	0.000
2.Service	2.74	0.93	4.43	0.65	-28.90	0.000
3.Technology	2.00	1.10	4.21	0.90	-30.44	0.000
4.Security	2.23	1.01	4.37	0.71	-33.24	0.000
5.Maintenance	2.21	1.10	4.30	0.78	-30.31	0.000
6.Support System	2.42	1.04	4.34	0.70	-30.40	0.000
7.Environmental and sustainable management	2.40	1.12	4.39	0.73	-30.62	0.000

Qualitative Finding. The qualitative finding was to confirm the quantitative result and create a management model for sports fields and facilities of Thailand in the aspect of “Management process theory” by focus group research method.

1. Property Management. Planning aspect: Regarding the conclusion of the group discussion, most experts commented on the definition of “stadiums and sports fields” that they should be defined clearly so as not to confuse.

Organizing aspect: Regarding the conclusion of the group discussion, most experts commented that there should be a management structure that would be more comprehensive than assignments and should increase the involvement of the private sector in management.

Leading aspect: After the group discussion, most experts commented that the administrators of the local administrative organization should realize the importance of exercise and sports policy, including the promotion of activity and sports.

Controlling aspect: Concerning the conclusion of the group discussion, most experts commented that written words should be adjusted, and there should be a follow-up on the implementation of sports promotion.

2. Service management. Planning aspect: Relating to the conclusion of the group discussion, the majority of experts commented on the words used. The sub-details in the service were covered, and some experts commented that the service fee should not be included because a sports facility is made for public service. While some experts commented that the service fee might be kept, the term may be adjusted.

Organizing. Leading and controlling aspects: the experts suggested adapting the use of the term Property management.

3. Technology management

Planning aspect: After the group discussion, most experts said that the local government

organization should have a database system and communication channels accessible to the public and easy to follow and evaluate.

Organizing, leading, and controlling aspects: the experts suggested adapting the term like Property management.

4. Safety management

Planning aspect: Relating to the conclusion of the group discussion, most experts said that all the staff in the sports organization should be trained in life-saving and the first aid less than once a month.

Organizing, leading, and controlling aspects: the experts suggested adapting the term like Property management.

5. Maintenance management

Planning aspect: Relating to the conclusion of the group discussion, most experts commented that the details were comprehensive. It was recommended to add the reduction of operational accidents, which suggests good maintenance management.

Organizing, leading, and controlling aspects: the experts suggested adapting the term like Property management.

6. Support System management

Planning aspect: Concerning the conclusion of the group discussion, most experts commented on the participation of the public, community, private sector, and public sector in regulating and conducting activities in sports facilities to increase the sense of ownership of sports facilities.

Organizing, leading, and controlling aspects: the experts suggested adapting the use of the term in a manner similar to Property management.

7. Environmental and sustainable management

Planning aspect: Regarding the conclusion on the results of the group discussion, the majority of experts had clear opinions on the interpretation of Environmental and sustainable management.

There should be a promotion for the development of potential for both people, and places to really achieve sustainability, as well as people in the area should become involved with sports facilities to achieve real sustainability.

Organizing, leading, and controlling aspects: the experts suggested adapting the use of the term in a manner similar to Property management.

DISCUSSION

The finding from this study can be discussed as follows;

Firstly, the results from the Quantitative found that the comparative analysis between the actual and expected conditions of the people who used the Property, Service, Technology, Security, Maintenance, Support System, Environmental and sustainable management under the local administrative organization. It is in line of "Song et al." which showed that consumer expectations were strongly related to the context of their ongoing therapeutic relationship with a regular GP (13).

Secondly, the result from the Qualitative finding was to confirm the result from the quantitative, and to create a management model for sports fields and facilities of Thailand in the aspect of "Management process theory" by focus group research method which were as follows;

1. Property Management

1.1) Planning aspect: Regarding the conclusion of the group discussion, most experts commented on the definition of "stadiums and sports field" that they should be defined clearly so as not to cause confusion. It is in line of "Podsakoff et al." which revealed that the clear conceptual definitions were not only identify the nature of the concept of interest, but also helped distinguish the focal concept from other, seemingly similar concepts in the field (14).

1.2) Organizing aspect: Regarding the conclusion of the group discussion, the majority of experts commented that there should be a management structure which would be more comprehensive than assignments and should increase the involvement of the private sector in management. It is in line of "Gordon" which showed that it may be better to work in partnership with private sector companies to facilitate access to data, products, research and development results and expertise, with a view to maximizing the overall community benefit from government-funded data and products, rather than competing with the private sector (15).

1.3) Leading aspect: With regard to the conclusion to the group discussion, the majority of experts commented that the administrators of the local administrative organization should realize the importance of exercise and sport policy including the promotion of exercise and sports. It is in line of "Jiménez Díaz-Benito et al." which found that doing the physical activity in the workplace with high variability would be useful to develop more interventions in the future, as well as to obtain global health indicators (16).

1.4) Controlling aspect: With respect to the conclusion of the group discussion, the majority of experts commented that written words should be adjusted and there should be the follow up on the implementation of sports promotion. It is in line of "Llewellyn-Bennett et al." which indicated that prolonged follow-up of trial participants after the end of the scheduled trial period can provide important information on both efficacy and safety outcomes (17).

2. Service management

2.1) Planning aspect: Relating to the conclusion on the group discussion, the majority of experts commented on words used. The sub-details in the service were covered and some experts commented that the service fee should not be included because a sports facility made for public service. While some experts commented that the service fee may be kept; the term may be adjusted. It is in line of "Turhani" which the paper found that the Service-Fee mechanism, service-Fee payment structure, and also the scope of service should be fee service for PPP project (18).

2.2) Organizing, leading, and controlling aspects: the experts suggested adapting the use of the term in a manner similar to Property management. It is in line of "Manev and Jakimovski" which found that knowledge management in successful sport organizations can be associated with their sustainability, continuity and achievement of communication (19).

3. Technology management

3.1) Planning aspect: With regard to the conclusion of the group discussion, the majority of experts gave opinions that the local government organization should have a database system and communication channels accessible to the public and easy to follow and evaluate. It is in line of "Hyland-Wood et al." which showed that an effective communication strategy was a two-way process that involved clear messages, delivered via appropriate platforms, tailored for

diverse audiences, and shared by trusted people. Ultimately, the long-term success depended on developing and maintaining public trust (20).

3.2) Organizing, leading, and controlling aspects: the experts suggested adapting the use of the term in a manner similar to Property management. It is in line of “Alhadad and Abood” which found the pioneer guide to acknowledge the importance of intermingling between a sport organization on one hand and information technology on the other (21).

4. Safety management

4.1) Planning aspect: Relating to the conclusion on the group discussion, the majority of experts said that all the staffs in the sport organization should be trained in life saving and the first aid at less once a month. It is in line of “Dobbinson et al.” which found that policy development for health promotion can be achieved in sports clubs when it is well supported by health agencies and consideration is given to the appropriateness of the specific behaviours to be encouraged for a given sport (22).

4.2) Organizing, leading, and controlling aspects: the experts suggested adapting the use of the term in a manner similar to Property management. It is in line of “Swan et al.” which found that their ground safety polices and guidelines should be developed specific to their sport (23).

5. Maintenance management

5.1) Planning aspect: Relating to the conclusion on the group discussion, the majority of experts commented that the details were comprehensive and it was recommended to add on the reduction of operational accidents, which suggests on a good maintenance management. It is in line of “Mwanza et al.” which revealed that safety in maintenance is concerned with the freedom from danger, protection from or not being exposed to the risk of harm or injury during the process of carrying out maintenance procedures. A framework was developed to improve safety during maintenance practices (24).

5.2) Organizing, leading, and controlling aspects: the experts suggested adapting the use of the term in a manner similar to Property management. It is in line of “Shuma and Ijigu” which found that their idea as the following, lack of employee experience, lack of coordination from top level to low level, Budget and financial constraints. To overcome these challenges, the

following recommendations have been forwarded, Nekemte town administration should approve the budget for the sports facilities in Nekemte town, for example, It should be defined the maintenance protocol. It should give the training for sport employees, and sport facility employees should be give high attention for football stadium (25).

6. Support System management

6.1) Planning aspect: With respect to the conclusion of the group discussion, the majority of experts commented on the participation of the public, community, private sector, public sector in regulating and conducting activities in sports facilities to increase the sense of ownership of sports facilities. It is in line of “Aggerholm and Breivik” which found that distinguishing between these modes of engagement can contribute to describing, analyzing and navigating in the variety of ways that participants engage in sport (26).

6.2) Organizing, leading, and controlling aspects: the experts suggested adapting the use of the term in a manner similar to Property management. It is in line of “Hong” which found that the responsibility for ensuring eSports players’ health and wellbeing should be shared and monitored by all stakeholders (27).

7. Environmental and sustainable management

7.1) Planning aspect: Regarding the conclusion on the results of the group discussion, the majority of experts had clear opinions on the interpretation of Environmental and sustainable management. There should be a promotion for the development of potential for both people and places to really achieve sustainability, as well as people in the area should become involved with sports facilities to achieve real sustainability. It is in line of “Manresa et al.” which indicated that implementing specific quality principles all the dimensions improved; thus, the organization becomes more sustainable (28).

7.2) Organizing, leading, and controlling aspects: the experts suggested adapting the use of the term in a manner similar to Property management. It is in line of “Graham et al.” revealed that very few programs currently had stand-alone courses dedicated to environmental sustainability in sport. There were significant barriers to adopting environmental sustainability in sport as a stand-alone course and as a module, which certainly made developing stand-alone coursework a long-term process (29).

CONCLUSION

The field management model, equipment and sports facilities of Thailand to be a guideline for the local administrative organizations to use for managing sports fields and facilities. Moreover, to raise standards for sports fields and facilities management of the local administrative organizations of Thailand. Furthermore, to provide people or service users of sports fields and facilities under the local administrative organizations of Thailand with more service convenience making them interested in more participating in sports activities, doing sports and exercise.

APPLICABLE REMARKS

- The organization should use sports activities to stimulate the public's attention by organizing sports activities with supporting standard, use technology to help public relations in various fields to make people in the area know and pay more attention to use the stadium service.
- Agencies should establish a system for collecting user information of sports facilities, generate a QR code to educate the people on sports fields and how to do exercise and correctly play sports. This will help them to better access sports field depending on the local context.
- Agencies should increase the green space in the sports fields as they should be useful not only to do exercise but bring the family to relax or do activities together for sustainability and continuity.

REFERENCES

1. The Ministry of Tourism and Sports Thailand. The Sixth National Sports Development Plan (2017 - 2021). 2022. Available from: https://www.rolandberger.com/publications/publication_pdf/roland_berger_the_sixth_national_sports_development_plan_2017_2021.pdf.
2. Grigoryeva VV, Andreev NV, Pozdnyakov KK. Features and priorities of mass sports infrastructure development. . 2021;**3**:225-230. doi: 10.17513/vaael.1911
3. Amornsriwatanakul A, Lester L, Bull FC, Rosenberg M. Ecological correlates of sport and exercise participation among Thai adolescents: A hierarchical examination of a cross-sectional population survey. *J Sport Health Sci*. 2020. doi: 10.1016/j.jshs.2020.04.012 PMID: 32439502
4. Khaosod Online. Retrieved January 30 2022. Available from: https://www.khaosod.co.th/around-thailand/news_5855118.
5. Kaewkajang P, Pluksacheewa T. Fitness Management System. Unpublished manuscript, Siam University, Bangkok, Thailand.2019.
6. Sasuad K, Nuntasen P. Sport Event Management Model of Thai Football Clubs for Promoting Tourism. *NRRU Communit Res J*. 2018;**13**(1):54-67.

- The administrators of the local government organization should support and encourage personnel responsible for sports to have opportunities for training, and study visits on the management of private sports fields.
- The administrators of the local government organization should collaborate with Sports associations to organize sports activities in local sports fields.
- The administrators of the local government organization should establish sports fields' management committee by inviting all sectors which are stakeholders to be committee.
- Personnel should be cultivated in values and awareness of participation in the sports fields ownership.

AUTHORS' CONTRIBUTIONS

Study Concept and Design: Wannothai Soongsawang, Nug-rob Rawangkarn. *Acquisition of data:* Wannothai Soongsawang, Nug-rob Rawangkarn. *Analysis and interpretation of data:* Wannothai Soongsawang, Nug-rob Rawangkarn. *Drafting of the manuscript:* Wannothai Soongsawang, Nug-rob Rawangkarn. *Critical revision of the manuscript for important information:* Wannothai Soongsawang, Nug-rob Rawangkarn. *Statistical analysis:* Wannothai Soongsawang, Nug-rob Rawangkarn. *Administrative, technical, and material support:* Wannothai Soongsawang, Nug-rob Rawangkarn. *Study supervision:* Wannothai Soongsawang, Nug-rob Rawangkarn.

CONFLICTS OF INTEREST

No potential conflict of interest relevant to this article was reported.

7. Department of Physical Education. The document of the sport stadium construction in the district level of Department of Physical Education. Retrieved January 30 2022. Available from: https://amnatcharoen.mots.go.th/download/article/article_20180302102034.pdf.
8. Department of Physical Education. The report of the assessment of the exercise in Thai population in 2020. Retrieved January 30. 2022.
9. Kwon YS, Lee BK, Sohn SY. Optimal location-allocation model for the installation of rooftop sports facilities in metropolitan areas. *Eur Sport Manag Q.* 2019;**20**(2):189-204. doi: [10.1080/16184742.2019.1598454](https://doi.org/10.1080/16184742.2019.1598454)
10. Cieřlikowski K, Brusok A. Determinants of effective management in the sport with the use of large sport arenas in selected cities. *Eur J Serv Manag.* 2017;**21**(1). doi: [10.18276/ejasm.2017.21-01](https://doi.org/10.18276/ejasm.2017.21-01)
11. Amaral CMDS, Mazzei LC, Bastos FDC. Managerial behavior of sports facilities managers: an approach with public and non-profit organizations in São Paulo. *Mot Rev de Educ Fis.* 2021;**27**. doi: [10.1590/S1980-657420210020320](https://doi.org/10.1590/S1980-657420210020320)
12. Mamashli J, Doosti M, Tabesh S, Farzan F, Abdavi F. Provision of an Integrated Health, Safety, and Environment Management Model in Sports Facilities in Iran. *Arch Hyg Sci.* 2019;**8**(4):286-298. doi: [10.29252/ArchHygSci.8.4.286](https://doi.org/10.29252/ArchHygSci.8.4.286)
13. Song HJ, Dennis S, Levesque JF, Harris MF. What do consumers with chronic conditions expect from their interactions with general practitioners? A qualitative study of Australian consumer and provider perspectives. *Health Expect.* 2020;**23**(3):707-716. doi: [10.1111/hex.13050](https://doi.org/10.1111/hex.13050) pmid: [32207220](https://pubmed.ncbi.nlm.nih.gov/32207220/)
14. Podsakoff PM, MacKenzie SB, Podsakoff NP. Recommendations for Creating Better Concept Definitions in the Organizational, Behavioral, and Social Sciences. *Organ Res Method.* 2016;**19**(2):159-203. doi: [10.1177/1094428115624965](https://doi.org/10.1177/1094428115624965)
15. Gordon N. Partnership between private and public sectors in service delivery. *WMO Bullet.* 2008;**57**(4):233-236. doi: [10.1111/gove.12462](https://doi.org/10.1111/gove.12462)
16. Jiménez Díaz-Benito V, Barriopedro M, Frédéric V. Physical activity and health promotion programmes in workplace: a meta-analysis of effectiveness in European organizations. *J Workplace Behav Health.* 2020;**35**. doi: [10.1080/15555240.2020.1720515](https://doi.org/10.1080/15555240.2020.1720515)
17. Kardakis T, Jerden L, Nystrom ME, Weinehall L, Johansson H. Implementation of clinical practice guidelines on lifestyle interventions in Swedish primary healthcare - a two-year follow up. *BMC Health Serv Res.* 2018;**18**(1):227. doi: [10.1186/s12913-018-3023-z](https://doi.org/10.1186/s12913-018-3023-z) pmid: [29606110](https://pubmed.ncbi.nlm.nih.gov/29606110/)
18. Turhani A. Service - Fee Mechanism in the PPP Projects. *Eur Sci J, ESJ.* 2013;**9**(19). doi: [10.19044/esj.2013.v9n19p%p](https://doi.org/10.19044/esj.2013.v9n19p%p)
19. Manev G, Jakimovski J. Role of knowledge management in sport organizations. *Skola biznisa.* 2017:150-171. doi: [10.5937/skolbiz2-16091](https://doi.org/10.5937/skolbiz2-16091)
20. Hyland-Wood B, Gardner J, Leask J, Ecker UKH. Toward effective government communication strategies in the era of COVID-19. *Humanit Soc Sci Commun.* 2021;**8**(30). doi: [10.1057/s41599-020-00701-w](https://doi.org/10.1057/s41599-020-00701-w)
21. Alhadad S, Abood O. Enhancing Smart Sport Management based on Information Technology. *Int Organiz.* 2018;**5**:19-26. doi: [10.9790/6737-05051926](https://doi.org/10.9790/6737-05051926)
22. Dobbins SJ, Hayman JA, Livingston PM. Prevalence of health promotion policies in sports clubs in Victoria, Australia. *Health Promot Int.* 2006;**21**(2):121-129. doi: [10.1093/heapro/dak001](https://doi.org/10.1093/heapro/dak001) pmid: [16403799](https://pubmed.ncbi.nlm.nih.gov/16403799/)
23. Swan P, Otago L, Finch CF, Payne WR. The policies and practices of sports governing bodies in relation to assessing the safety of sports grounds. *J Sci Med Sport.* 2009;**12**(1):171-176. doi: [10.1016/j.jsams.2007.12.004](https://doi.org/10.1016/j.jsams.2007.12.004) pmid: [18358778](https://pubmed.ncbi.nlm.nih.gov/18358778/)
24. Mwanza B, Mbohwa C. Safety in Maintenance: An Improvement Framework. *Procedia Manuf.* 2017;**8**:657-664. doi: [10.1016/j.promfg.2017.02.084](https://doi.org/10.1016/j.promfg.2017.02.084)
25. Shuma C, Ijigu A. Practice and Challenges of Sport Facility Management in Nekemte Town, Advances. 2020;**3**(1):11-15. doi: [10.11648/j.advances.20220301.13](https://doi.org/10.11648/j.advances.20220301.13)
26. Aggerholm K, Breivik G. Being, having and belonging: values and ways of engaging in sport, Sport in Society. 2021;**24**(7):1141-1155. doi: [10.1080/17430437.2020.1734562](https://doi.org/10.1080/17430437.2020.1734562)
27. Hong HJ. eSports: the need for a structured support system for players. *Europe Sport Manage Quarter.* 2020. doi: [10.1080/16184742.2022.2028876](https://doi.org/10.1080/16184742.2022.2028876)

28. Manresa A, Escobar RD. Excellence in Sustainable Management in a Changing Environment. *Sustainability*. 2021;**13**(4):2296. doi: [10.3390/su13042296](https://doi.org/10.3390/su13042296)
29. Graham J, Trendafilova S, Ziakas V. Environmental sustainability and sport management education: bridging the gaps. *Manag Sport Leisure*. 2018;**23**(4-6):422-433. doi: [10.1080/23750472.2018.1530069](https://doi.org/10.1080/23750472.2018.1530069)