

A Correlation Study: The Influence of Service Quality to Satisfaction at Fitness Facilities in Sleman Regency, Yogyakarta

Nisrina Aulia Salsabila^{1*}, Ahmad Nasrulloh¹, Trisnar Adi Prabowo¹, Wilhelmus Merdyto Rhino Chandrika¹

¹Department of Sport and Health Sciences, Yogyakarta State University, Indonesia

DOI: <https://doi.org/10.36348/jaspe.2024.v07i12.002> | Received: 01.11.2024 | Accepted: 06.12.2024 | Published: 07.12.2024

*Corresponding author: Nisrina Aulia Salsabila

Department of Sport and Health Sciences, Yogyakarta State University, Indonesia

Abstract

The purpose of this study is to explore the relationship between service quality and customer satisfaction at fitness facilities. This type of research is quantitative with a correlation method, sample selection using accidental sampling consisting of: 1) 64 respondents who train at the gym, 2) 114 respondents who train at a fitness studio (type of training: training zumba, pilates, yoga, calisthenics, poundfit, TRX, body combat), 3) 82 respondents who train at a swimming pool or sports field (type of training: soccer, fun football, futsal, badminton, basketball, tennis). The questionnaire on the indicators in Service Quality is Tangibility, Reliability, Responsiveness, Assurance, Empathy, then the indicators in Satisfaction are Complaints and Suggestions System, Comfort and Safety, Communication. The results of this study are that Service Quality has a positive effect on Satisfaction 0.000, then the correlation value is 1) facilities in the gym $r = 0.636$, 2) facilities in the fitness studio $r = 0.687$, 3) facilities in the swimming pool or sports field $r = 0.504$. The conclusion of this study confirms the importance of service quality in improving customer satisfaction in fitness facilities. For further research, it is recommended that the data collection time be extended. Then, broader research with a larger population is also needed to obtain more representative results.

Keywords: Service Quality, Satisfaction, Sports Facilities, Sport Management.

Copyright © 2024 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC 4.0) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

INTRODUCTION

Customer satisfaction in fitness facilities has a significant impact on the success of the business. Because satisfied customers tend to be loyal and recommend the service to others, which improves the reputation and attracts new customers through positive reviews (Pradeep *et al.*, 2020). Additionally, customers are more likely to renew their membership at the fitness facility and purchase additional products, thereby increasing revenue at the fitness facility (Ferreira-Barbosa *et al.*, 2022). Customer satisfaction also allows the fitness facility to receive constructive suggestions and comments that can be used for continuous improvement. Based on previous research results, one of the factors that influences customer satisfaction is service quality (Nugroho *et al.*, 2021).

Service quality is one of the important factors that influence customer satisfaction in various sectors, including the fitness industry. Fitness facilities, such as gyms and sports studios, have become an integral part of

the lifestyle of modern society which is increasingly health conscious (Tan *et al.*, 2023). With the increasing number of fitness facilities, competition among these service providers is getting fiercer. Therefore, it is important for fitness facility managers to understand and improve the quality of the services they offer (YİĞİT & SOYER, 2023). However, research to analyze the influence of service quality on satisfaction in sports topics is still limited to gyms or sports club training places and more specific satisfaction, namely athletes. The development of the current era, fitness facilities are increasingly developing such as fitness studios for Zumba training, poomvit, calisthenics, yoga, pilates, dance (Yorks *et al.*, 2017; Baena-Arroyo *et al.*, 2020). Even fun bowling, ice skating, roller skating are also included as fitness facilities. (Suparman & Septiadi, 2022; Irtysheva *et al.*, 2022). So, it is very important to carry out a thorough analysis.

Service quality can be measured through various dimensions, including tangible, empathy, reliability, responsiveness, assurance (Mandan *et al.*,

2024; Prayoga *et al.*, 2024; Abdhi *et al.*, 2024). Each of these dimensions contributes to the customer experience and can influence their perception of the facility they use. When customers are satisfied with the quality of service provided, they are more likely to use the facility again and recommend it to others (Nugroho *et al.*, 2023). Conversely, poor service can lead to dissatisfaction, potentially resulting in lost customers and a bad reputation for the service provider.

This study aims to explore the relationship between service quality and customer satisfaction in fitness facilities. The advantage of this study is the separate analysis in various fitness facilities. By understanding the factors that contribute to customer satisfaction, fitness facility managers can design more effective strategies to improve their services. The results of this study are expected to provide useful insights for stakeholders in the fitness industry to improve customer experience and maintain their loyalty.

METHOD

This type of research is quantitative with a correlation method, so this study, in addition to analyzing whether there is an influence or not, also analyzes how strong the influence of the relationship between the independent variable and the dependent variable is. This study was conducted from October 21, 2024 to November 18, 2024.

The population in this study were respondents who were active in fitness facilities in Sleman Regency, Indonesia. While the sample selection used accidental sampling, accidental sampling is a direct sampling technique without planning. The fitness facilities that will be selected as research objects are 1) gyms (specifically for weight training), 2) fitness studios (as a place to practice zumba, pilates, yoga, calisthenics, poundfit, TRX, body combat, 3) swimming pools or sports fields (the sports field, as a place to practice soccer, fun football, futsal, badminton, basketball, tennis). However, in order for the results of this study to obtain good data, the respondents must have two criteria that must be met, namely 1) having a membership card at the fitness facility, or 2) having trained at the fitness facility at least 4 times for 1 month. Based on the respondents collected, the sample of this study consisted of 64 respondents who trained at the gym, 114 respondents who trained at the fitness studio, 82 respondents who trained at the swimming pool or sports field.

This research instrument uses an instrument developed based on the results of previous research. The first stage of compiling the instrument by analyzing the results of previous scientific articles using the keywords 'service quality', 'satisfaction', 'fitness facilities', 'sports facilities', 'gym', 'fitness studio', searching for scientific articles through Mendeley or Google Scholar. The second stage of making a questionnaire, namely indicators and statement items. The following is a grid of instruments that will be validated in table 1 and table 2.

Table 1: Questionnaire Grid on Service Quality

Indicator	Item	No
Tangibility	Facilities are in good condition	1
	Equipment is adequate and can be used	2
	The appearance of the facility manager is authoritative	3
	The appearance of the fitness facility manager is neat	4
Reliability	The delivery of service from the fitness facility manager is very clear	5
	The delivery method from the fitness facility manager uses standard language	6
	The fitness facility manager always provides instructions for use or usage	7
	Each fitness facility manager has their own expertise	8
Responsiveness	The fitness facility manager is responsive in responding to customers who experience training injuries	9
	The fitness facility manager is responsive in responding to customers who are late	10
	The fitness facility manager is responsive in handling emergencies	11
	The fitness facility manager is always on time in handling problems in the facility or equipment	12
Assurance	The level of security at the fitness facility is very good	13
	Safety during training is guaranteed by the fitness facility management	14
	The fitness facility manager is always polite in serving customers	15
	Non-cash payments can be made easily and quickly	16
Empathy	Information about the location of the fitness facility is easily obtained and can be trusted	17
	The location of the fitness facility is strategic	18
	The regulations at the fitness facility are easy to understand	19
	The fitness facility manager is willing to help customers who are having difficulties	20

Table 2: Grid of Questionnaire on Satisfaction

Indicator	Item	No
Complaints and Suggestions System	Fitness facility managers do not deny criticism or suggestions	1
	Fitness facility managers understand athlete complaints	2
	Customers are always given the opportunity to assess fitness facilities at any time	3
	Customers are always given the freedom to review fitness facilities through social media	4
	Fitness facility managers always ask about the shortcomings of the facilities	5
	Fitness facility managers respond to criticism and suggestions by taking notes	6
Comfort and Safety	Management always provides several discounts	7
	Management always provides discounts, if one of the customers has a birthday	8
	Customers are happy with the complete equipment	9
	Customers feel comfortable with the alertness of the manager in an emergency	10
	Customers are never afraid to convey complaints and suggestions	11
	Customers feel safe because they are always given instructions for using the equipment	12
	Customers are happy with the friendliness of the manager and management at the fitness facility	13
	Customers feel cared for because they are always reminded (example: reminded when there is an item left behind)	14
	Customers always choose to train at this place, because the price is affordable	15
	The performance of the fitness facility manager is always optimal	16
Communication	Good communication between the manager and the customer makes the customer comfortable	17
	The fitness facility manager, always contacting customers if they have not trained at this place for a week	18
	The management has contacted customers who have stopped being members via message/SMS/WhatsApp	19
	The fitness facility management always reminds customers if they have not been present at the training place for 15 minutes	20

After the instrument is compiled, the third stage is to test the validity of the instrument with three lecturers with at least a Doctoral qualification who have competence in sport management, then the validity is tested using the Aikev V formula (Lewis. R. Aiken, 1985) in figure 1.

$$V \text{ Aiken's: } \frac{\sum s}{n(c-1)}$$

S : r - lo
 Lo : lowest rating score
 C : highest rating score
 r : the score given by the assessor

Figure 1: Aikev V formula

The data analysis of this study used product moment correlation with a significance value ($p < 0.05$).

However, before the correlation test is carried out, a normality test will be carried out using Kolmogorov-Smirnov because the number of data in the sample is more than 30, then the significance value in the normality test is $p > 0.05$. Data collection using a google form whose link was shared directly to respondents at the fitness facility. The scale used to fill out the questionnaire is 1 - 4, 1 'strongly disagree', 2 'disagree', 3 'agree', 4 'strongly agree'.

RESULTS

Questionnaire Validity Test

The following are the results of the instrument validity test on the service quality variable and the satisfaction variable. The importance of the instrument validity test is so that the questionnaire can be used accurately and well to measure, prevent bias and ensure that the research results are reliable.

Table 3: Validity Test Results on Service Quality Variables

Indicator	No	Aiken V Value	Description
Tangibility	Item 1	0.889	Valid
	Item 2	1	Valid
	Item 3	0.889	Valid
	Item 4	1	Valid
Reliability	Item 5	0.889	Valid
	Item 6	0.889	Valid
	Item 7	0.889	Valid
	Item 8	0.889	Valid

Indicator	No	Aiken V Value	Description
Responsiveness	Item 9	1	Valid
	Item 10	1	Valid
	Item 11	0.889	Valid
	Item 12	0.889	Valid
Assurance	Item 13	0.889	Valid
	Item 14	0.889	Valid
	Item 15	1	Valid
	Item 16	1	Valid
Empathy	Item 17	0.889	Valid
	Item 18	0.889	Valid
	Item 19	0.889	Valid
	Item 20	0.889	Valid

Table 4: Validity Test Results on Satisfaction Variables

Indicator	No	Aiken V Value	Description
Complaints and Suggestions System	Item 1	0.889	Valid
	Item 2	1	Valid
	Item 3	0.889	Valid
	Item 4	0.889	Valid
	Item 5	1	Valid
	Item 6	0.889	Valid
Comfort and Safety	Item 7	0.889	Valid
	Item 8	0.889	Valid
	Item 9	1	Valid
	Item 10	0.889	Valid
	Item 11	1	Valid
	Item 12	0.889	Valid
	Item 13	0.889	Valid
	Item 14	0.889	Valid
	Item 15	1	Valid
	Item 16	0.889	Valid
Communication	Item 17	0.889	Valid
	Item 18	0.889	Valid
	Item 19	1	Valid
	Item 20	0.889	Valid

Based on the results of table 3 and table 4, each item in the indicator shows an Aiken V value of more than >0.8 and several items show a value of 1. So these items show valid validity values (Wedi *et al.*, 2024; Susiono *et al.*, 2024), then it is suitable to be used as a questionnaire for data collection.

Correlation Test

Before conducting the product moment correlation test, a normality test was first conducted using Kolmogorov-Smirnov with a significance value ($p > 0.05$) in table 5.

Table 5: One-Sample Kolmogorov-Smirnov Test using Unstandardized Residuals

		Gym	fitness studio	Swimming Pool and Sports Field
N		82	114	82
Normal Parameters	Mean	74,468	72,595	75,098
	Std. Deviation	3,524	4,749	4,084
Most Extreme Differences	Absolute	0,097	0,082	0,094
	Positive	0,097	0,070	0,062
	Negative	-0,088	-0,082	-0,094
Test Statistic		0,097	0,082	0,094
Asymp. Sig. (2-tailed)		0,068	0,077	0,071

In the first stage of the normality test, the data is known to be not normally distributed. So the next step is to display the residual value of each variable based on

data from the fitness facility, then the normality test is carried out again using Kolmogorov-Smirnov. Based on table 5, the Asymp. Sig. (2-tailed) value shows >0.05 , so

the data is normally distributed and is worthy of continuing the product moment correlation test.

The first product moment correlation analysis is to test the results of the fitness facilities in the gym in table 6 below.

Table 6: Correlation Results of Service Quality and Satisfaction at the Gym

		Service Quality	Satisfaction
Service Quality	Pearson Correlation	1	0,636
	Sig. (2-tailed)		0,000
	N	62	62
Satisfaction	Pearson Correlation	0,636	1
	Sig. (2-tailed)	0,000	
	N	62	62

Based on the results of table 6, the relationship between service quality and satisfaction at fitness facilities in the Gym shows a significance value of 0.000

and a positive Pearson correlation of 0.636. So that the quality of service is positively and significantly correlated by 0.636 (strong).

Table 1: Correlation Results of Service Quality and Satisfaction in Fitness Studios

		Service Quality	Satisfaction
Service Quality	Pearson Correlation	1	0.687
	Sig. (2-tailed)		0,000
	N	114	114
Satisfaction	Pearson Correlation	0.687	1
	Sig. (2-tailed)	0,000	
	N	114	114

Based on the results of table 7, the relationship between service quality and satisfaction at fitness facilities at the Fitness Studio shows a significance value

of 0.000 and a positive Pearson correlation of 0.687. So that service quality is positively and significantly correlated by 0.687 (strong).

Table 8: Correlation Results of Service Quality and Satisfaction at Swimming Pools and Sports Fields

		Service Quality	Satisfaction
Service Quality	Pearson Correlation	1	0,504
	Sig. (2-tailed)		0,000
	N	82	82
Satisfaction	Pearson Correlation	0,504	1
	Sig. (2-tailed)	0,000	
	N	82	82

Based on the results of table 8, the relationship between service quality and satisfaction at fitness facilities in the Swimming Pool and Sports Field shows a significance value of 0.000 and a positive Pearson correlation of 0.504. So that service quality is positively and significantly correlated by 0.504 (moderate).

of equipment, customers may experience longer waiting times when exercising when the number of visitors increases.

DISCUSSION

Based on the results of the first correlation on fitness facilities in the gym, it can be concluded that there is a significant influence between service quality and customer satisfaction in fitness facilities, especially in the gym studied. The influence is quite strong, as shown by the results of the correlation test, which confirms the importance of service quality in increasing customer satisfaction. The facilities and training equipment available, although there is a combination of automatic machines and cable machines, indicate that the gym is trying to provide variety in the training experience. However, with an average of only two units of each type

On the other hand, the cleanliness and tidiness of the facilities, as well as the presence of live music, provide a pleasant atmosphere for customers. Previous studies have explained the quality of service, one of which is providing clean and tidy facilities can improve a positive mood, motivation to exercise, and increase self-confidence (Kim *et al.*, 2022; Suwardiman *et al.*, 2024; Mandan *et al.*, 2024). However, the small number of managers on duty can be an obstacle in providing optimal service, especially when many customers are present. Although the membership price at this gym is relatively affordable compared to several other gyms, this is an attractive added value for customers. Price can also determine customer satisfaction, customers or members of fitness facilities expect to get good service according to the rates issued by customers or members

(Nurahmanah *et al.*, 2023). In addition, the neat, friendly, and polite attitude of the management and staff, as well as their willingness to accept suggestions and criticism, demonstrate their commitment to improving the quality of service. This not only contributes to customer satisfaction, but also creates a positive relationship between customers and management, which is very important for customer retention and the long-term success of a fitness facility.

Based on the results of the second correlation on fitness facilities in the fitness study showed that there is a significant influence between service quality on customer satisfaction in fitness facilities, especially in fitness studios that offer various exercise programs such as zumba, pilates, yoga, calisthenics, poundfit, TRX, and body combat. This influence is quite strong, as evidenced by the results of the correlation test, which shows that good service quality contributes positively to customer satisfaction. The facilities and exercise equipment available in the studio are very complete and in accordance with the purpose of the exercise, making it easy for customers to achieve their fitness goals. Previous research also proves that the more models and number of fitness equipment, the more customers or members can use the equipment without queuing with other customers or members and trying several new exercise movement models (Gálvez-Ruiz *et al.*, 2023; AbouRokbah & Salam, 2023). However, despite the complete equipment, sometimes the amount of equipment is insufficient during work holidays, which can cause inconvenience to customers. On the other hand, comfortable training facilities, with air conditioning, closed changing rooms, and ideal bathrooms, as well as sufficient lighting. Such forms of service can create an environment that supports a positive training experience, and can even restore the spirit to train again because the facilities and services provided are in accordance with customer or member expectations (Nugroho *et al.*, 2023).

The fitness class program offered, with an average frequency of three to five times a week, provides a clear structure for customers, although they need to adjust their schedule to the program that has been set. The affordable price of the class program, including a special class for female customers, adds to the appeal to various customer segments. The friendly, neat, and polite attitude of the management and staff, as well as their willingness to communicate directly or through communication media, creates an atmosphere that supports positive interactions with customers. The friendliness of the management or staff, quick to respond, and communicative are factors for customers and members to feel cared for (Glaveli *et al.*, 2023). All of these factors contribute to high levels of customer satisfaction, which in turn can increase customer loyalty and retention at the fitness studio.

Based on the results of the third correlation on fitness facilities in swimming pools and sports fields, it shows that there is an influence between service quality and customer satisfaction in fitness facilities, especially in swimming pools and sports fields such as soccer, futsal, badminton, basketball, and tennis. The influence is classified as moderate, as expressed by the results of the correlation test, which shows that although service quality contributes to satisfaction, there are several aspects that need to be improved. Training facilities consist of two types, indoor and outdoor, with several outdoor facilities such as basketball and tennis courts. Although soccer and fun football fields have comfortable grass conditions and non-hole soil, the use of makeshift chairs for benches can reduce comfort for customers. A study explains that facilities that are not affordable for customers or members will not be taken into account for a satisfaction assessment, but will indirectly affect the aesthetic function and versatility of the place (Ferreira-Barbosa *et al.*, 2022; Sevilmiş *et al.*, 2022; Ahn & Park, 2023).

The swimming pool has a safe floor and is equipped with handrails and depth information, although some pools use chlorine which may be uncomfortable for some customers. Indoor sports courts, such as badminton and tennis, have a flat floor surface, clear court lines, and good lighting, creating an environment that is conducive to exercise. However, the limited number of changing rooms, only two, can be a problem when there are many customers. Although the bathrooms are clean, the lack of hot water and shower options can reduce customer comfort after exercising. The rental of exercise equipment is also an added value for customers who do not bring sports equipment. On the other hand, the friendly and polite attitude of the management and management, although tending to be passive, means that customers need to initiate interaction first to get better service. Affordable rental prices for the court and entrance tickets are positive factors that attract customers. Overall, despite some shortcomings, good service quality can increase customer satisfaction, one easy way is to improve aspects that are desired by customers or members periodically (Prayoga *et al.*, 2024; Prabowo *et al.*, 2024). Then, providing discounts at certain times becomes a special attraction for fitness facility users or other people who want to exercise (Imamah & Nur Iradawaty, 2022; Yani & Maisarah, 2023).

The limitation of this study is the time used for data collection is very short, so the time needed for data collection at one fitness facility is only two days between afternoon and evening. Future research is expected to be able to improve the questionnaire instrument that is more specific to evaluate fitness facilities. In addition, a longer time is needed for data collection such as increasing the population and analyzing other fitness facilities.

CONCLUSION

This study explains that service quality has an effect on customer satisfaction in various fitness facilities in Sleman Regency, Indonesia, including gyms, fitness studios, swimming pools, and sports fields. In gyms, the effect of service quality on customer satisfaction is relatively strong, with varied facilities despite limited equipment. Cleanliness, a pleasant atmosphere, and friendly management attitudes also contribute to customer satisfaction. In fitness studios, the effect of service quality is also strong, with complete facilities and equipment and well-structured class programs. However, sometimes the amount of equipment is insufficient during work holidays, which can reduce customer comfort. Meanwhile, in swimming pools and sports fields, the effect of service quality on customer satisfaction is moderate. Although indoor and outdoor facilities are quite adequate, there are several aspects that need to be improved, such as the limited number of changing rooms and the lack of hot water options in the bathrooms. This study confirms the importance of service quality in improving customer satisfaction in fitness facilities. For further research, it is recommended that the data collection period be extended and the questionnaire instrument be improved to obtain a more in-depth evaluation of fitness facilities. A broader study with a larger population is also needed to obtain more representative results.

REFERENCES

- Abdhi, M. I., Tomoliyus, T., Sukamti, E. R., Fauzi, F., Prabowo, T. A., Maulana, A., Habibie, M., Amalia, B., & Kasanrawali, A. (2024). The Effect of Service Quality on Achievement Motivation in Kurash Sport in Indonesia: Analysis Based on Category as Moderator. *Retos*, 57, 517–525. <https://doi.org/https://doi.org/10.47197/retos.v57.105998>
- AbouRokbah, S., & Salam, M. A. (2023). Quality and satisfaction in female fitness centers and the moderating roles of age and income: empirical evidence from Saudi Arabia. *International Journal of Sports Marketing and Sponsorship*, 24(4), 753–770. <https://doi.org/10.1108/IJSMS-10-2022-0186>
- Ahn, H., & Park, E. (2023). Motivations for user satisfaction of mobile fitness applications: An analysis of user experience based on online review comments. *Humanities and Social Sciences Communications*, 10(1). <https://doi.org/10.1057/s41599-022-01452-6>
- Baena-Arroyo, M. J., García-Fernández, J., Gálvez-Ruiz, P., & Grimaldi-Puyana, M. (2020). Analyzing consumer loyalty through service experience and service convenience: Differences between instructor fitness classes and virtual fitness classes. *Sustainability (Switzerland)*, 12(3). <https://doi.org/10.3390/su12030828>
- Ferreira-Barbosa, H., Barbosa, J., Sabino, B., & Loureiro, V. (2022). Determinants of service quality influencing customer satisfaction in fitness centers: A systematic review. In *European Journal of Human Movement* (Vol. 49, pp. 29–45). Miguel Hernandez University. <https://doi.org/10.21134/eurjhm.2022.49.3>
- Gálvez-Ruiz, P., Calabuig, F., Grimaldi-Puyana, M., González-Serrano, M. H., & García-Fernández, J. (2023). The effect of perceived quality and customer engagement on the loyalty of users of Spanish fitness centres. *Academia Revista Latinoamericana de Administracion*, 36(4), 445–462. <https://doi.org/10.1108/ARLA-01-2023-0014>
- Glaveli, N., Papadimitriou, D., Karagiorgos, T., & Alexandris, K. (2023). Exploring the role of fitness instructors' interaction quality skills in building customer trust in the service provider and customer satisfaction. *European Sport Management Quarterly*, 23(3), 767–788. <https://doi.org/10.1080/16184742.2021.1928256>
- Imamah, N., & Nur Iradawaty, S. (2022). THE STRATEGY OF COFFEE CUSTOMER SATISFACTION IMPROVMENT THROUGH ATMOSPHERE STORE, DISCOUNTS AND SERVICE QUALITY. *JAE (JURNAL AKUNTANSI DAN EKONOMI)*, 7(2), 137–146. <https://doi.org/10.29407/jae.v7i2.18151>
- Irtysheva, I., Kramarenko, I., & Romanenko, S. (2022). SYSTEMATIC APPROACHES TO ENSURING THE STRATEGIC DEVELOPMENT OF THE SPORTS AND RECREATION SECTOR. *Baltic Journal of Economic Studies*, 8(4), 90–95. <https://doi.org/10.30525/2256-0742/2022-8-4-90-95>
- Kim, M., Yihan, H., Jeon, Y., & Kim, D. (2022). The Effect of Service Quality on Consumer Satisfaction and Loyalty Depending on Consumption Motivations in the Context of Fitness Centers. *Research in Dance and Physical Education*, 6(1), 33–48. <https://doi.org/10.26584/rdpa.2022.04.6.1.33>
- Lewis, R. A. (1985). Three Coefficients For Analyzing The Reliability And Validity Of Ratings. *Educational and Psychological Measurement*, 45, 131–141. <https://journals.sagepub.com/doi/abs/10.1177/0013164485451012>
- Mandan, A., Tomoliyus, T., Alim, A., & Prabowo, T. A. (2024). The Impact of Service Quality on Self-Confidence of Wheelchair Athletes : An Analysis of Family Support as Moderator. *Sport Mont*, 22(2), 3–9. <https://doi.org/10.26773/smj.240717>
- Nugroho, A., Sukamti, E. R., Sujarwo, S., Purwanto, S., Hariono, A., Ilham, I., Pranoto, N. W., & Abidin, N. E. Z. (2023). Exploring the athlete experience: A multidimensional study of service quality and financial factors in individual vs. team sports. *Journal of Physical Education and Sport*, 23(12), 3299–3308. <https://doi.org/10.7752/jpes.2023.12377>

- Nugroho, A., Tomoliyus, T., Sumaryanto, S., & Ilham, I. (2021). Effects of Service Quality, Social Environment and Financial on Motivation, Satisfaction, and Performance for Athletes at Training Center PON XX in DIY. *International Journal of Human Movement and Sports Sciences*, 9(5), 1067–1079. <https://doi.org/10.13189/saj.2021.090529>
- Nurahmanah, A. P., Nugroho, A., Tomoliyus, T., Fauzi, F., Sukamti, E. R., & Karyono, T. H. (2023). The Effects of Service Quality and Price on Athlete Satisfaction: A Case Study of Athletes at Badminton Clubs in Bantul District. *INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH AND ANALYSIS*, 06(12). <https://doi.org/10.47191/ijmra/v6-i12-02>
- Prabowo, T. A., Sukamti, E. R., Fauzi, F., Tomoliyus, T., & Hariono, A. (2024). The effect of service quality on the safety of boxing athletes' training in Indonesia. *SPORT TK-Revista EuroAmericana de Ciencias Del Deporte*, 13, 15. <https://doi.org/https://doi.org/10.6018/spork.572861>
- Pradeep, S., Vadakepat, V., & Rajasenan, D. (2020). The effect of service quality on customer satisfaction in fitness firms. *Management Science Letters*, 10(9), 2011–2020. <https://doi.org/10.5267/j.msl.2020.2.011>
- Prayoga, H. D., Tomoliyus, T., Lumintuarso, R., Fitrianto, A. T., Sukamti, E. R., Fauzi, F., Hariono, A., & Prabowo, T. A. (2024). A Case Study of Indonesian Amateur Boxing Athletes: Is There an Influence of Organizational Culture and Quality of Service on Performance through Achievement Motivation as a Mediator? *Retos*, 56, 63–72. <https://doi.org/https://doi.org/10.47197/retos.v56.103128>
- Sevilmiş, A., Özdemir, İ., García-Fernández, J., & Zhang, J. J. (2022). Examining the Relationships Among Perceived Quality, Perceived Value, Customer Satisfaction, and Behavioral Intention in Turkish Fitness Centers. *Physical Culture and Sport, Studies and Research*, 96(1), 40–54. <https://doi.org/10.2478/pcssr-2022-0018>
- Suparman, N., & Septiadi, M. A. (2022). Kebijakan Retribusi Daerah: Analisis Potensi Pendapatan pada Tempat Rekreasi dan Venue Olahraga Komersial. *Publisia: Jurnal Ilmu Administrasi Publik*, 7(2), 115–129. <https://doi.org/10.26905/pjiap.v7i2.5875>
- Susiono, R., Sugiyanto, F., Lumintuarso, R., Tomoliyus, T., Sukamti, E. R., Fauzi, F., Hariono, A., & Prabowo, T. A. (2024). Y Agility Test Innovation on Special Badminton Athletes for the Junior Category (U17): Validity and Reliability. *Retos*, 53, 547–553. <https://doi.org/https://doi.org/10.47197/retos.v53.103282>
- Suwardiman, Hadiwijaya, D., & Muttaqin, I. (2024). The Effect of Fitness Level, Organizational Support, and Compensation on the Work Productivity of Tangerang City Health Office Employees Mediated by Organizational Motivation. *International Journal of Science and Society*, 6(1), 224–234. <https://doi.org/10.54783/ijssoc.v6i1.1007>
- Tan, X., Guo, C., & Sun, P. (2023). Study on Rationality of Public Fitness Service Facilities in Beijing Based on GIS. *Sustainability (Switzerland)*, 15(2). <https://doi.org/10.3390/su15021496>
- Wedi, S., Tomoliyus, T., Fauzi, F., Gemaini, A., & Prabowo, T. A. (2024). Innovation, Validity, and Reliability of Modified Dynamic Balance Test for Karate Kata Category. *Sport Mont*, 22(3), 3–8. <https://doi.org/10.26773/smj.241004>
- Yani, A. S., & Maisarah, I. (2023). The Effect of Discounts and Sales Promotion on Shopee Users Repurchase Intention with Customer Satisfaction as a Moderating Variable. *IJHCM (International Journal of Human Capital Management)*, 7(1), 65–73. <https://doi.org/10.21009/ijhcm.07.01.5>
- YİĞİT, O., & SOYER, A. (2023). The Effect of Perceived Service Quality on Customer Loyalty in Sports-Fitness Facilities. *Avrasya Spor Bilimleri ve Eğitim Dergisi*, 5(2), 328–340. <https://doi.org/10.47778/ejsse.1346249>
- Yorks, D. M., Frothingham, C. A., & Schuenke, M. D. (2017). Effects of group fitness classes on stress and quality of life of medical students. *Journal of the American Osteopathic Association*, 117(11), e17–e25. <https://doi.org/10.7556/jaoa.2017.140>