

## Consumers' behavioral interests and sports services: Examining customer loyalty in Indonesian fitness centers

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### ABSTRACT

The development of the fitness industry in the world is increasing and has become an important issue in several countries, including Indonesia. Currently, the number of fitness participants in Indonesia has increased. An increase in fitness participants must be accompanied by an improvement in service quality, as poor service could risk a decrease in participants. The aim of this study was to examine the relationship between perceived quality, the perceived value of customers' satisfaction, and future intentions in Kediri town. The sample consisted of 59 customers in 18 fitness industry centers. The data collection used a questionnaire technique, and the data analysis was based on the confirmatory factors and structural equation models. The research findings showed that the perceived satisfaction of clients greatly influences the value of loyalty and the location greatly influences the customers' future intentions. Furthermore, there was a positive relationship between customer satisfaction and location factors with loyalty and future intentions. Perceived future loyalty and intentions influence customer satisfaction and the perceived importance of location in the fitness center. Consequently, perceived value positively affects both consumer loyalty and their future intentions.

### KEYWORDS

Sports Management; Sports Marketing; Loyalty; Future Intentions

## 1. INTRODUCTION

Lack of physical activity is recognized by the World Health Organization (WHO) as the fourth leading cause of death in the world (Koch et al., 2023). Globally, nearly 500,000 new cases of preventable chronic disease will occur between 2020 and 2030 at an estimated cost of nearly US\$ 300 billion, approximately US\$ 27 billion per year (Codella & Chirico, 2023). It has been more than two years since COVID-19 spread around the world, becoming the first major pandemic of the 21st century, and brought not only confinement, but also despairs, and death (Plaza-Ccuno et al., 2023; Keller et al., 2022). In addition, physical inactivity can lead to overweight or obesity and increase a person's risk of developing cardiovascular disease and type 2 diabetes, among other negative health conditions (Grimes et al., 2023). New WHO 2020 guidelines on physical activity recommend that all adults should engage in 150–300 minutes of moderate-intensity physical activity, 75–150 minutes of vigorous-intensity physical activity, or an equivalent combination of moderate-intensity and vigorous-intensity aerobic physical activity per week (Dai et al., 2023; Bull et al., 2020). The world has been living with a pandemic of physical inactivity and other sedentary behaviors for years (So & Kwon, 2023). Therefore, lack of physical activity is a global problem today, but global progress in reducing the levels of physical inactivity is still slow (Santos et al., 2023; WHO, 2018). However, initiating and sustaining lifestyle changes can be difficult (Peiris et al., 2023).

The physical activity, sports, and health sectors are growing rapidly and appear to be attractive areas for business and professional development with great potential globally (Batrakoulis et al., 2023). The fitness club is one of the largest sporting arenas worldwide (Gjestwang et al., 2023). Commercial fitness centers represent an opportunity to be physically active, the majority offering group and individual activities (Reseth et al., 2019). Lifestyle therapy is always the first line of disease prevention and treatment whenever possible; thus, having a clinical focus on lifestyle care is expected to outpace historical struggles for implementing lifestyle changes (Nadolsky et al., 2022). Numerous studies have shown that gyms have developed strategies over the years to encourage people to go to the gym (Ong et al., 2021). Research on the correlations or determinants of physical activity has developed rapidly and has mainly concentrated on individual-level characteristics in high-income countries, namely age, gender, health status, lifestyle, self-efficacy, and motivation (Peng et al., 2023; Bauman et al., 2012). The global burden associated with physical inactivity is enormous. The relative burden is greatest in high-income countries; however, the largest number of people (absolute burden) affected by physical inactivity live in middle-income countries given their population size (Katzmarzyk et al., 2022).

Based on the background above, it is necessary to research about consumer behavior interests and sports services: examining fitness center customer loyalty which includes the relationship between perceived quality, the perceived value of customers' satisfaction, and future intentions. The study aims to describe the relationship between perceived quality, the perceived value of customers' satisfaction, and future intentions in Kediri town.

## **2. METHODS**

### **2.1. Design and Participants**

Using a non-experimental explorative design, this research involved samples consisting of 59 fitness center clients (55% female and 45% male) in Kediri, East Java Province, Indonesia. The sample sizes were mostly college students (50%) and university students (32%), high school students (5%), and employees (13%).

### **2.2. Data Collection**

The instrument, developed in previous research (Brady & Cronin, 2001; Oliver, 1997; Zeithaml, 1988; Zeithaml et al., 1996), was used in this study and included demographic questions comprising 24 items grouped into two sections. The first part consists of 10 items proposed by Brady & Cronin (2001) to evaluate the quality perceptions through three dimensions (facilities, employees, and programs) in addition to the four items proposed by Oliver (1997) to evaluate the quality in general. The second part consists of a scale to measure the perceived value (Zeithaml, 1988) with three items, satisfaction (Cronin et al., 2000; Oliver, 1997) with three items, infrastructure with three items, location with three items, and future intentions (Zeithaml et al., 1996) with two items. The platform of a nine-point Likert scale ranged from 'strongly disagree' (1) to 'fully agree' (9). The response scales are related to the fitness industry (Avourdiadou & Theodorakis, 2014; García-Fernández et al., 2018; Theodorakis et al., 2014).

The data was collected from clients in 18 fitness centers that have the public spaces in Kediri town including a fitness room, two or more multipurpose spaces for directed activities, and a room equal to or greater than 25 square meters. The researchers contacted the fitness center authorities by telephone followed by two meetings with managers who were interested in this research. Then, 18 fitness centers participated. Three meetings were held with managers and coordinators of each fitness center to explain the objectives and methodology of the research. To anticipate disruptions in the fitness centers' day-to-day responsibilities and duties, a surveyor was assigned in the morning and the other one in the afternoon to collect as many surveys as possible, requesting each client to participate as they

entered the facility. Each participant took 20 minutes to complete the survey. The data was collected over ten weeks.

### **2.3. Statistical Analysis**

Two stages of statistical data analysis were developed using SEM and Smart PLS software. The researchers conducted an exploratory factor analysis (EFA) to obtain a factorial structure followed by a confirmatory factor analysis (CFA) aiming to confirm the measurement model and utilize the maximum likelihood procedures. The internal consistency of construction was calculated through composite reliability by considering adequate values higher than 0.70 (Hair et al., 2009). To test the internal validity, the mean-variance extraction (AVE) was estimated to evaluate the convergent validity, indicating a value higher than 50 (Fornell & Larcker, 1981; Hair et al., 2009). The discriminant validity was assumed if the AVE value for each construct was higher than the square correlation between the construct and other variables (Fornell & Larcker, 1981).

In the second stage, the structural equation model was estimated to prove the research hypothesis, evaluating the predictive validity of the satisfaction scale, quality, advice, infrastructure, and location. The data sufficiency is assessed by various good-of-fit indexes (Brown, 2006) for both the measurement and structural models. Specifically, the model fit was assumed to be statistically significant ( $p \leq 0.05$ ) from the chi-square ( $\chi^2$ ), the statistical ratio  $\chi^2$  toward the value of degrees of freedom is less than 3 (Ato et al., 2013), CFI index, NFI, IFI and TLI are greater than 0.90 (Hair et al., 2009). The RMSEA index is considered optimal with a value lower than 0.06 and can be accepted with a value lower than 0.08 (Byrne, 2000).

### **3. RESULTS**

Utilizing principles of component extraction method and Oblimin's oblique rotation method, all items have a loading factor higher than 0.20. The Cronbach's alpha reliability estimates consist of the future intentions (0.26), loyalty (0.42), location (0.43), facilities and infrastructure (0.64), satisfaction (0.51) and quality (0.76), along with a global scale or an average of 0.50. Table 1 shows the validity and reliability within X1, X2, X3, and X4 values of Y1 and Y2 viewed from the Composite Reliability of the significant results.

**Table 1.** Validity and reliability construction

Variable	Cronbach's Alpha	Rho_A	Reliability Komposite	Average Variance
X1 (Quality)	0.764	0.835	0.824	0.515
X2 (Satisfaction)	0.750	0.810	0.754	0.514
X3 (Infrastructure)	0.810	0.845	0.805	0.579
X4 (Location)	0.770	0.797	0.718	0.577
Y1 (Loyalty)	0.791	0.821	0.713	0.561
Y2 (Future Intentions)	0.795	0.825	0.708	0.564

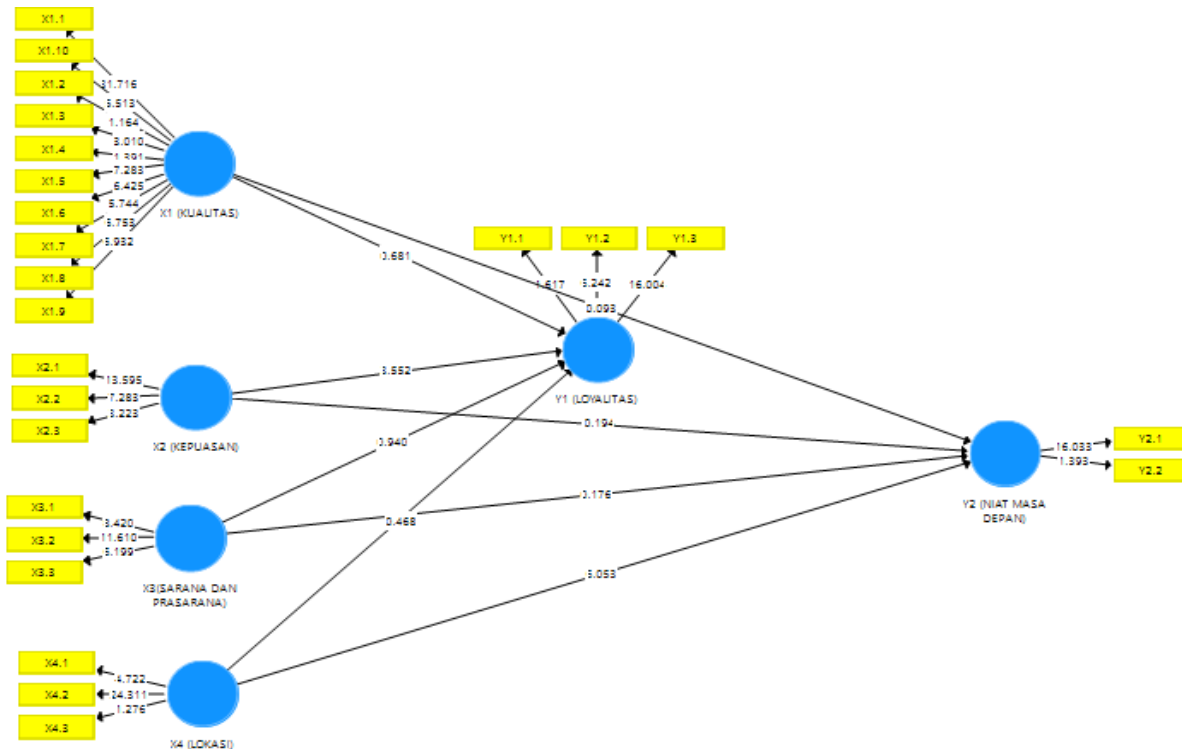
The green indicator means significant, obtained from calculations of the smart PLS, and each item significantly carries its respective construct. The convergent validity is satisfactory for all acceptable constructs values ranging from 0.51 (satisfaction), 0.57 (facilities and infrastructure) to 0.56 (future intentions) (Table 1). The descriptive statistics and correlations are presented in Table 2.

**Table 2.** Path coefficients between service factors and customer loyalty and future intentions

Variable	Original sample	Sample average	Standard Deviation	t value	p value
X1 (Quality) → Y1 (Loyalty)	0.266	0.254	0.391	0.681	0.001
X1 (Quality) → Y2 (Future Intentions)	-0.017	0.003	0.180	0.093	0.000
X2 (Satisfaction) → Y1 (Loyalty)	0.503	0.506	0.142	3.552	0.000
X2 (Satisfaction) → Y2 (Future Intentions)	-0.012	-0.014	0.062	0.194	0.004
X3 (Infrastructure) → Y1 (Loyalty)	-0.172	-0.167	0.183	0.940	0.115
X3 (Infrastructure) → Y2 (Future Intentions)	0.012	0.023	0.069	0.176	0.000
X4 (Location) → Y1 (Loyalty)	0.160	0.182	0.343	0.468	0.003
X4 (Location) → Y2 (Future Intentions)	0.966	0.945	0.160	6.053	0.000

As evidenced from Table 2, there was a relationship between the dependent variable and the independent variable, in this case, the customers' satisfaction and loyalty including the  $p$ -value=0.000 and location factors towards the future intentions in the fitness centers in Kediri town. The  $p$ -value=0.000 means that there was a relationship between the independent and independent variables. There was correlations between quality (X1) and Loyalty (Y1) with  $p$ -value 0.001, quality (X1) and Y2 (future intentions) with  $p$ -value 0.000, satisfaction (X2) and loyalty (Y1) with  $p$  value 0.000, satisfaction (X2) and future intentions (Y1) with  $p$  value 0,000, infrastructure (X3) and future intentions (Y2) with  $p$ -value 0.000, location (X2) and loyalty (Y1) with  $p$ -value 0.003, location (X4) and future intentions (Y2) with  $p$ -value 0.000, and there was not correlations between infrastructure (X3) and loyalty (Y1) with  $p$ -value 0.115.

The structural equation model is used to test the relationships and interactions between variables offered in the model (satisfaction, quality, advice, infrastructure, location, future intentions, and loyalty). The overall assessment of the structural model shows that satisfaction, loyalty, and location factors for future intentions indicate a significant relationship (Atulkar & Kesari, 2017). Figure 1 presents the structural model of clients' loyalty and future intentions in Kediri town.



**Figure 1.** Loyalty chain structural model and future intentions of clients in the Kediri, East Java, Indonesia

#### 4. DISCUSSION

The objective of this research is to analyze the relationship between the perceived quality, satisfaction, facilities, infrastructure, location, loyalty, and future intentions of fitness center clients in Kediri town, East Java Province, Indonesia. This research also expands the literature regarding the relationship between these variables in the sports context. The importance lies in the scarcity of studies related to the fitness industry offering novelty in the field of consumers' sports behaviors. The findings show that fitness center clients in Kediri town involved in the program and interacted with employees positively but had a lower perception of facilities resulting from the lack of investment in the spatial design of sports facilities and a bad perception about them. Even satisfaction and behavioral intentions (Zeithaml et al., 1996) show high scores positively. Based on the results of the study showed that there

was correlations between quality and loyalty, quality and (future intentions), satisfaction and loyalty, satisfaction and future intentions, infrastructure and future intentions, location and loyalty, location and future intentions, and there was not correlations between infrastructure and loyalty.

Considering the first hypothesis, findings from fitness center consumers noted a direct and positive relationship between satisfaction and loyalty, location factors, and future intentions. The results of previous studies deal with different consumers' sports organizations (Calabuig et al., 2010; Calabuig et al., 2012; Calabuig et al., 2015; Nuviala et al., 2012a; Nuviala et al., 2012b; Nuviala et al., 2015) in Greek and Spanish fitness centers (García-Fernández et al., 2018; Theodorakis et al., 2014). One of the strengths of this research is to ratify this relationship in terms of the consumers of Kediri town so that the public sector clients experience the sports services, loyalty, and future intentions depending on positive perceptions of the values.

If a client experiences the loyalty and future intentions as direct effects of services provided by employees, the sports activities and equipment will have an optimal quality and a positive value. Besides, the previous studies on the fitness centers in different countries show the relationship between location perception and satisfaction (the second hypothesis). Avourdiadou & Theodorakis (2014); Hsueh & Su (2013); Theodorakis et al. (2014); Tsitskari et al. (2014) reported that the greater the perception of quality, the greater the client satisfaction. Therefore, the findings of this research reinforce the analysis of data in the same industry especially in Kediri town.

This strengthens the relationship between the variables concerning the consumers in the fitness center. In connection with the third hypothesis, different studies on sport consumers have revealed the relationship between the value and satisfaction (Bodet, 2012; Calabuig et al., 2010; Calabuig et al., 2012; Nuviala et al., 2012a), and this research supports such research results. However, in the case of Nuviala et al. (2015), the results do not strengthen this relationship, suggesting that a heterogeneous sample of consumers might result in a lack of relationship between the two variables since attitudes change according to the sports services. The results of this study show a positive relationship with the fitness center customers, exactly as specified in the work of Murray & Howat (2002); Theodorakis et al. (2014); García-Fernández et al. (2018) along with the same typology of consumers, showing that satisfaction is a consequence of the perception of a client's value of the fitness center. Thus, the importance of perceived value seems to exist as long as there is a positive relationship between the future intentions and loyalties as expressed by Calabuig et al. (2014); Theodorakis et al. (2014) to guarantee the fourth hypothesis of this research.

The clients with positive value perceptions are those who are more than likely to be loyal. More recently, findings in studies by Avourdiadou & Theodorakis (2014); Theodorakis et al. (2014) showed a positive relationship between satisfaction and loyalty in fitness center clients. The current research findings reinforce this relationship in terms of the consumers' fitness centers in Spain, especially the fifth hypothesis. In short, PT fitness center clients in Kediri town are satisfied with the services they received, had a positive attitude, and consequently they would be more loyal.

Recent studies seem to confirm that if consumers of fitness centers have positive perceptions of customers' satisfaction and location factors, this can affect future loyalty and intentions, resulting in better clients. For this reason, fitness centers need to continue evaluating their consumers. Loyalty and future intentions will depend on their perceptions of variables such as satisfaction and location factors. In particular, the fitness center managers must conduct the best management of the three factors analyzed in this research. Facilities, employees, and programs are crucial in the sport's client loyalty chain. Thus, the proper management of human resources and physical activities of the program will affect the positive perceptions of the quality.

Likewise, the maintenance of cleanliness, the attractiveness of facilities, equipment conditions, and good environmental conditions must be of particular concern, because they will affect consumers' perceptions. If clients feel the positive quality of these factors, they will get a positive value perception, thereby reducing the monetary and non-monetary sacrifices associated with this variable (Oliver, 1999). As has been pointed out, continuous analysis of the quality perceived by the customers will help determine the level of consumers' satisfaction. The findings show the effects of satisfaction and location so that the managers must manage their resources properly to achieve a high level of loyalty and future intentions. The greater the perception of satisfaction and the better the location, the better the customers at the gym. For this reason, the fitness industry in Kediri town is regarded as a reference (IHRSA, 2016), and the results can be used to increase the loyalty and future intentions of customers in the fitness centers in other parts of the world specifically in Kediri town, East Java, Indonesia.

## 5. CONCLUSIONS

This research has revealed a positive relationship between the customers' satisfaction and location factors, loyalty, and future intentions. The perceived loyalty and future intentions affect the customers' satisfaction and location in the fitness centers. The perceived value positively influences future loyalty and intentions. However, this research is related to the quantitative transverse studies regarded as a limitation toward learning. In line with this, analyzing the loyalty with subjective



behavioral measures can produce steps that do not fully represent the customers' loyalty even though it has been the most commonly used instrument in the most investigative cases. Future research should consider an association or federation of fitness centers to achieve a heterogeneous sample size and a larger fitness center. The use of longitudinal designs and qualitative methodologies will help achieve a deeper understanding of consumers of these services, allowing for the management of loyalty data as well as the frequency of use, longevity in facilities, and clients' recommendations. As it stands, this type of study is in its initial stages, providing many investigative opportunities to seize.

## 6. REFERENCES

1. Atulkar, S., & Kesari, B. (2017). Satisfaction, loyalty and repatronage intentions: Role of hedonic shopping values. *Journal of Retailing and Consumer Services*, 39, 23–34. <https://doi.org/10.1016/j.jretconser.2017.06.013>
2. Avourdiadou, S., & Theodorakis, N. D. (2014). The development of loyalty among novice and experienced customers of sport and fitness centres. *Sport Management Review*, 17(4), 419–431. <https://doi.org/10.1016/j.smr.2014.02.001>
3. Batrakoulis, A., Veiga, O. L., Franco, S., Thomas, E., Alexopoulos, A., Valcarce-Torrente, M., Santos-Rocha, R., Ramalho, F., Di Credico, A., Vitucci, D., Ramos, L., Simões, V., Romero-Caballero, A., Vieira, I., Mancini, A., & Bianco, A. (2023). Health and fitness trends in Southern Europe for 2023: A cross-sectional survey. *AIMS Public Health*, 10(2), 378–408. <https://doi.org/10.3934/publichealth.2023028>
4. Bauman, A. E., Reis, R. S., Sallis, J. F., Wells, J. C., Loos, R. J., Martin, B. W., & Lancet Physical Activity Series Working Group. (2012). Correlates of physical activity: Why are some people physically active and others not? *The Lancet*, 380(9838), 258–271. [https://doi.org/10.1016/S0140-6736\(12\)60735-1](https://doi.org/10.1016/S0140-6736(12)60735-1)
5. Bodet, G. (2012). Loyalty in sport participation services: An examination of the mediating role of psychological commitment. *Journal of Sport Management*, 26(1), 30–42. <https://doi.org/10.1123/jsm.26.1.30>
6. Brady, M. K., & Cronin, J. J. (2001). Some new thoughts on conceptualizing perceived service quality: A hierarchical approach. *Journal of Marketing*, 65(3), 34–49. <https://doi.org/10.1509/jmkg.65.3.34.18334>
7. Brown, T. A. (2006). *Confirmatory factor analysis for applied research*. The Guilford Press.
8. Bull, F. C., Al-Ansari, S. S., Biddle, S., Borodulin, K., Buman, M. P., Cardon, G., Carty, C., Chaput, J. P., Chastin, S., Chou, R., Dempsey, P. C., DiPietro, L., Ekelund, U., Firth, J., Friedenreich, C. M., Garcia, L., Gichu, M., Jago, R., Katzmarzyk, P. T., Lambert, E., (2020). World Health Organization 2020 guidelines on physical activity and sedentary behaviour. *British Journal of Sports Medicine*, 54(24), 1451–1462. <https://doi.org/10.1136/bjsports-2020-102955>
9. Byrne, B. M. (2000). *Structural equation modeling with AMOS: Basic concepts, applications, and programming* (2nd ed.). Routledge Taylor & Francis Group.
10. Calabuig, F., Burillo, P., Crespo, J., Mundina, J., & Gallardo, L. (2010). Satisfaction, quality and perceived value in spectators of athletics. *International Journal of Medicine and Science of Physical Activity and Sport*, 10(40), 577–593.
11. Calabuig, F., Crespo, J., & Mundina, J. (2012). Effect of perceived cost, service quality and satisfaction on future intentions of spectators. *Estudios de Economía Aplicada*, 30(2), 619–636.

12. Calabuig, F., Núñez-Pomar, J., Prado-Gascó, V., & Añó, V. (2014). Effect of price increases on future intentions of sport consumers. *Journal of Business Research*, 67(5), 729–733. <https://doi.org/10.1016/j.jbusres.2013.11.035>
13. Calabuig, F., Prado-Gascó, V., Crespo, J., Núñez-Pomar, J., & Añó, V. (2015). Spectator emotions: Effects on quality, satisfaction, value, and future intentions. *Journal of Business Research*, 68(7), 1445–1449. <https://doi.org/10.1016/j.jbusres.2015.01.031>
14. Codella, R., & Chirico, A. (2023). Physical Inactivity and Depression: The Gloomy Dual with Rising Costs in a Large-Scale Emergency. *International Journal of Environmental Research and Public Health*, 20(2), 1-5. <https://doi.org/10.3390/ijerph20021603>.
15. Cronin, J.J., Brady, M.K., & Hult, G.T.M. (2000). Assessing the effects of quality, value and customer satisfaction on consumer behavioral intentions in service environments. *Journal of Retailing*, 76(2), 193–218. [http://dx.doi.org/10.1016/S0022-4359\(00\)00028-2](http://dx.doi.org/10.1016/S0022-4359(00)00028-2).
16. Dai, T., Wang, J., Gan, G., Zhang, C., Dong, X., Yang, P., Wang, Y., Xie, J., Xiao, R., & Duan, Y. (2023). The moderating role of physical activity on the relationship between work intensity and depressive symptoms among the employees. *SSM - Population Health*, 23, 1-10. <https://doi.org/10.1016/j.ssmph.2023.101435>.
17. Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50. <https://doi.org/10.1177/002224378101800104>
18. García-Fernández, J., Gálvez-Ruiz, P., Fernández-Gavira, J., Vélez-Colon, L., Pitts, B., & Bernal-García, A. (2018). The effects of service convenience and perceived quality on perceived value, satisfaction and loyalty in low-cost fitness centers. *Sport Management Review*, 21(3), 250–262. <https://doi.org/10.1016/j.smr.2017.07.003>
19. Gjestvang, C., Tangen, E. M., Arntzen, M. B., & Haakstad, L. A. H. (2023). How do fitness club members differentiate in background characteristics, exercise motivation, and social support? A cross-sectional study. *Journal of Sports Science & Medicine*, 22(2), 235–244. <https://doi.org/10.52082/jssm.2023.235>
20. Grimes, A., Lightner, J. S., Eighmy, K., Steel, C., Shook, R. P., & Carlson, J. (2022). Decreased Physical Activity Among Youth Resulting from COVID-19 Pandemic-Related School Closures: Natural Experimental Study. *JMIR Formative Research*, 6(4), 1-7. <https://doi.org/10.2196/35854>.
21. Hair, J., Black, W. C., Babin, B., & Anderson, R. E. (2009). *Multivariate data analyses* (7th ed.). Prentice-Hall.
22. Hsueh, Y. S., & Su, J. M. (2013). The Relationship among service quality and satisfaction of customers in fitness centers located in Southern Taiwan. *Life Science Journal*, 10(4), 2613–2618.
23. International Health, Racquet & Sportsclub Association (IHRSA). (2016). *The IHRSA global report 2015*. IHRSA.
24. Katzmarzyk, P. T., Friedenreich, C., Shiroma, E. J., & Lee, I. M. (2022). Physical inactivity and non-communicable disease burden in low-income, middle-income and high-income countries. *British Journal of Sports Medicine*, 56(2), 101–106. <https://doi.org/10.1136/bjsports-2020-103640>.
25. Keller, E., Widestrom, M., Gould, J., Fang, R., Davis, K. G., & Gillespie, G. L. (2022). Examining the Impact of Stressors during COVID-19 on Emergency Department Healthcare Workers: An International Perspective. *International Journal of Environmental Research and Public Health*, 19(6), 1-15. <https://doi.org/10.3390/ijerph19063730>.
26. Koch, K., Tillet, E., & Loosemore, M. (2023). Survey of emergency medicine doctors in London physical activity characteristics, awareness of guidelines and prescribing behaviours. *BMJ Open Sport & Exercise Medicine*, 9(2), 1-9. <https://doi.org/10.1136/bmjsem-2022-001495>.
27. Murray, D., & Howat, G. (2002). The relationships among service quality, value, satisfaction, and future intentions of customers at an Australian sports and leisure centre. *Sport Management Review*, 5(1), 25–43. [https://doi.org/10.1016/S1441-3523\(02\)70060-0](https://doi.org/10.1016/S1441-3523(02)70060-0)

28. Nadolsky, K., Baraki, A., & Nadolsky, S. (2022). Incorporating a gym facility in a lifestyle medicine practice for patients with diabetes mellitus. *American Journal of Lifestyle Medicine*, 17(3), 386–396. <https://doi.org/10.1177/15598276221089898>
29. Nuviala, A., Grao-Cruces, A., Fernández-Ozcorta, E., & Nuviala, R. (2015). Asociación entre calidad del servicio deportivo, valor y satisfacción de usuarios en España. *Universitas Psychologica*, 14(2), 589–598.
30. Nuviala, A., Grao-Cruces, A., Pérez-Ordás, R., Boceta, M., Nuviala, R., & González, J. A. (2012a). Calidad, satisfacción y valor percibido de los usuarios de un servicio deportivo público. *Movimento*, 18(4), 11–32.
31. Nuviala, A., Grao-Cruces, A., Pérez-Turpin, J. A., & Nuviala, R. (2012b). Perceived service quality, perceived value, and satisfaction in groups of users of sports organizations in Spain. *Kinesiology*, 44(1), 94–103.
32. Oliver, R. L. (1997). *Satisfaction: A Behavioural Perspective on the Consumer*. McGraw-Hill.
33. Oliver, R.L. (1999). Value as excellence in the consumption experience in Holbrook, M.B. (Ed.): *Consumer Value: A Framework for Analysis and Research*. Routledge.
34. Ong, A. K. S., Prasetyo, Y. T., Picazo, K. L., Salvador, K. A., Miraja, B. A., Kurata, Y. B., Chuenyindee, T., Nadlifatin, R., Redi, A. A. N. P., & Young, M. N. (2021). Gym-Goers Preference Analysis of Fitness Centers during the COVID-19 Pandemic: A Conjoint Analysis Approach for Business Sustainability. *Sustainability*, 13(18), 1-17. <https://doi.org/10.3390/su131810481>.
35. Peiris, C. L., Gallagher, A., Taylor, N. F., & McLean, S. (2023). Behavior change techniques improve adherence to physical activity recommendations for adults with metabolic syndrome: A systematic review. *Patient Preference and Adherence*, 17, 689–697. <https://doi.org/10.2147/PPA.S393174>
36. Peng, B., Ng, J. Y. Y., & Ha, A. S. (2023). Barriers and facilitators to physical activity for young adult women: a systematic review and thematic synthesis of qualitative literature. *The International Journal of Behavioral Nutrition and Physical Activity*, 20(1), 1-17. <https://doi.org/10.1186/s12966-023-01411-7>.
37. Plaza-Ccuno, J. N. R., Vasquez Puri, C., Calizaya-Milla, Y. E., Morales-García, W. C., Huancahuire-Vega, S., Soriano-Moreno, A. N., & Saintila, J. (2023). Physical inactivity is associated with job burnout in health professionals during the COVID-19 pandemic. *Risk Management and Healthcare Policy*, 16, 725–733. <https://doi.org/10.2147/RMHP.S393311>
38. Riseth, L., Nøst, T. H., Nilsen, T. I. L., & Steinsbekk, A. (2019). Long-term members' use of fitness centers: a qualitative study. *BMC Sports Science, Medicine & Rehabilitation*, 11(1), 1-9. <https://doi.org/10.1186/s13102-019-0114-z>.
39. Santos, A. C., Willumsen, J., Meheus, F., Ilbawi, A., & Bull, F. C. (2023). The cost of inaction on physical inactivity to public health-care systems: A population-attributable fraction analysis. *The Lancet Global Health*, 11(1), 32–39. [https://doi.org/10.1016/S2214-109X\(22\)00464-8](https://doi.org/10.1016/S2214-109X(22)00464-8)
40. So, B., & Kwon, K. H. (2023). A “health message” on sustainable physical and mental health for the prolonged COVID-19 and other pandemics. *Postgraduate Medicine*, 135(1), 13–30. <https://doi.org/10.1080/00325481.2022.2134693>
41. Theodorakis, N. D., Howat, G., Ko, Y. J., & Avourdiadou, S. (2014). A comparison of service evaluation models in the context of sport and fitness centres in Greece. *Managing Leisure*, 19(1), 18–35. <https://doi.org/10.1080/13606719.2013.849505>
42. Tsitskari, E., Antoniadis, C. H., & Costa, G. (2014). Investigating the relationship among service quality and customer commitment in Cyprian fitness centres. *Journal of Physical Education and Sport*, 14(4), 514–520. <https://doi.org/10.7752/jpes.2014.04079>
43. World Health Organization. (2018). *Global action plan on physical activity 2018–2030: More active people for a healthier world*. WHO Press. <https://apps.who.int/iris/handle/10665/272722>

44. Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: A means-end model and synthesis of evidence. *Journal of Marketing*, 52(3), 2–22. <https://doi.org/10.1177/002224298805200302>
45. Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1996). The behavioral consequences of service quality. *Journal of Marketing*, 60(4), 31–46. <https://doi.org/10.2307/1251929>

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The authors declare no conflict of interest.

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