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Model based on service quality, satisfaction and trust, the antecedents of federated athletes' happiness and loyalty

Antecedents of athletes' happiness and loyalty

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Abstract

Purpose – The main aim of this work is to design a model in which service quality receives satisfaction and trust and they have influence on happiness and loyalty.

Design/methodology/approach – A SEM-PLS model is designed to explain the happiness of athletes. This is tested through a survey of Spanish karate federates. The sample proposes 693 responses are collected.

Findings – The results indicate that service quality has a strong positive influence on satisfaction and trust, and it has an indirect influence on happiness and loyalty of the Spanish karate federates.

Research limitations/implications – This article contributes to the literature increasing the knowledge of the variables that have positive influence, as antecedents of happiness and loyalty in karate federations.

Practical implications – The results of this study can help the decision-making of the governing boards of sports federations so they will be more aware of the strategies that promote the happiness and loyalty of the athlete.

Originality/value – One of the original contributions of this work is that the model shows the loyalty, happiness, trust and satisfaction as a result of quality services.

Keywords Happiness, Satisfaction, Trust, Service quality, Sport management, Loyalty, Karate, PLS, SEM

Paper type Research paper

1. Introduction

Federations are non-profit sports entities whose main purpose is the promotion of sport; governments use sports federations to exalt sport and maximise sporting achievements ([Consejo Superior de Deportes, 2019](#)). The longer athletes are linked to a federation, the more likely they are to achieve their goals. The loyalty and happiness of the federated can be key variables for these purposes.

The growth of sports federations is not proportional to the increase in physical activity that has been taking place in recent years ([Wemmer and Koenigstorfer, 2016](#)). Sport non-profit entities are not taking advantage of the interest that the sport currently generates ([Smith and Stewart, 2013](#)). To reverse this situation, two possible actions can be considered: attract new athletes or retain those who are dissatisfied. The study carried out in this work focuses on the second option, the improvement of the athlete's fidelity to maintain the long-term relationship with the federation.

For all this, the main objective of this work is to understand what the antecedents of loyalty in the field of federated sport are. To do this, a model is proposed with the variables and connections that explain loyalty. The variables of the model obtained through an exhaustive review of the literature are the service quality, satisfaction, trust and happiness. Happiness is especially important due to the close relationship it has with sport and loyalty.

The authors are grateful to the Spanish Regional Karate Federations, especially to the Madrid Karate Federation, for all their collaboration in the development of this research.

The proposed model is tested with data obtained from a survey of karate federation members in Spain. Karate is a sport that is in an intermediate situation in reference to the number of federated licenses. In addition, it is a representative sport of all federated sports, since the average number of athletes per club in karate is 52.33 and in the total number of federated licenses it is 52.29. Finally, it was chosen because the growth of karate licenses has been stagnant in the recent years (Cuesta-Valiño *et al.*, 2022b).

2. Conceptual framework and hypotheses

One of the main objectives of this work is to propose an SEM model that explains the relationships between service quality, trust, satisfaction and happiness as a background to loyalty to the organisation in which they are federated. This model has important implications for both the contribution to the literature and for the practice of marketing strategies to build the loyalty of the federated karate athlete. Figure 1 shows the connections and the variables of the model. Derived from the connections of this model, the hypotheses of the study are proposed.

Trust is a fundamental element that enhances the individual's cohesion, which makes it easier to achieve the goals developed by the company (Józefowicz, 2013). Trust promotes relationships to be maintained in the long term (Morgan and Hunt, 1994). These consequences of trust are especially important in sports. Having confidence in an organisation means that you believe that the actions it takes will satisfy the needs of the consumer (Anderson and Weitz, 1989).

The quality of the service is one of the variables most closely related to trust according to the bibliometric analysis of Palácios *et al.* (2021).

In different areas, the positive influence of service quality on trust has been confirmed, especially when greater risk is perceived as happens in the digital environments (Qalati *et al.*, 2021; Dogra and Kaushal, 2023) or when the relationship between the company and the consumer is continuous over time (Hasugian and Lubis, 2021). Therefore, the following hypothesis is proposed:

H1. Service quality has a positive influence in trust of federated athletes.

The perceived quality of service is defined as the judgement posed by a consumer about the excellence or degree of superiority of a certain product (Zeithaml, 1988).

Consumer expectations play a very important role since the consumer calculates the perceived quality as the discrepancies between the previous expectations and the perceptions of the purchased service (Hennig-Thurau *et al.*, 2001). Quality has been widely studied in

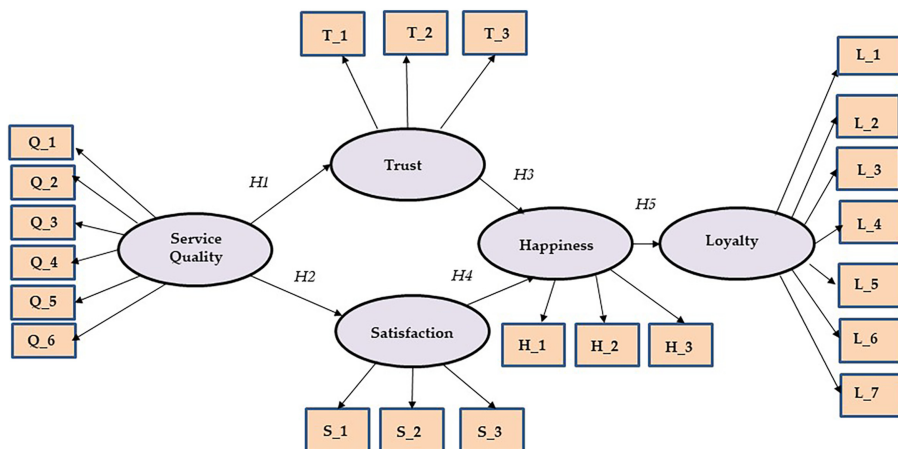


Figure 1.
Conceptual model and hypothesis

Source(s): Author's own creation

recent decades and for this reason there are numerous scales that measure service quality in the literature. SERVQUAL is a scale proposed by Parasuraman *et al.* (1988) and it is one of the most applied scales in studies of various fields (Farooq *et al.*, 2019; Samen *et al.*, 2013).

Satisfaction has been defined as an emotional reaction to the differences perceived by the consumer between the expectations before the purchase and the perceptions after the purchase (Andreassen, 2000). It is a subjective assessment that the consumer creates after the first value judgement that follows the transaction (Zablah *et al.*, 2016).

Satisfaction is cumulative, especially in services that involve a continuous relationship over time, as happen with the relationship between athletes and federations (Cuesta-Valiño *et al.*, 2021).

Perceived service quality and satisfaction are variables with a very close relationship; there is a large amount of evidence that confirms the positive influence of service quality on satisfaction in many areas (Meesala and Paul, 2018; Hult *et al.*, 2019), in the sports sector; the relationship between both variables has also been confirmed (García-Fernández *et al.*, 2018; Cuesta-Valiño *et al.*, 2021).

Therefore, the following hypothesis is posited:

H2. Service quality has a positive influence in satisfaction of federated athletes.

The relationship between trust and happiness depends on the context in which it is being studied (Barra *et al.*, 2018). In an aggregate social context, the relationship between both variables is not confirmed in the short term, but it is confirmed in the long term (Bartolini and Mikucka, 2017). The relationship between confidence and happiness is demonstrated both at the aggregate level and at the individual level (Barra *et al.*, 2018; Núñez-Barriopedro *et al.*, 2021). In the field of sports, we also find studies that confirm the positive effect of confidence on happiness (Baek, 2019; Hernández García de Velazco *et al.*, 2020) and even in non-profit sports organisations (Cuesta-Valiño *et al.*, 2020).

Therefore, the following hypothesis is proposed:

H3. Trust has a positive influence in happiness of federated athletes.

Satisfaction and happiness are two closely related variables. In fact, happiness is defined as an emotion of satisfaction that people experience in their inner life (Alarcón, 2015) or a positive psychological state derived from a satisfying or pleasurable experience (Ravina-Ripoll *et al.*, 2019a). A fund of positive experiences makes up consumer satisfaction, and this leads to happiness (Dagger and Sweeney, 2006). This argument would coincide with the bottom-up theory of happiness formulated by Gong and Yi (2018). In the field studied in this paper, these lines of research make a lot of sense since the relationship between members and federations is long term.

Sometimes happiness acts as an antecedent of satisfaction, as occurs in the field of tax rates (Núñez-Barriopedro *et al.*, 2023). However, it is more common for satisfaction to positively affect happiness (Gómez-Baya *et al.*, 2021). In the sports sector, it has also been demonstrated that satisfaction is an antecedent of happiness (Loranca-Valle *et al.*, 2019).

Therefore, the following hypothesis is proposed:

H4. Satisfaction has a positive influence in happiness of federated athletes.

Loyalty is a complex variable, and despite the numerous studies that have been carried out on this variable, a consensus has not yet been reached on how it behaves (Pressgrove and McKeever, 2016; Loranca-Valle *et al.*, 2021).

Loyalty is composed of two concepts that work together to provide the variable with the greatest explanatory power. One is behavioural and the other attitudinal. Behavioural loyalty is related to the future intentions that want to maintain the relationship with the organisation while attitudinal loyalty refers to attachment to the organisation (Rauyrueen and Miller, 2007).

As a result of loyalty, authors explain resistance to change (Bodet, 2012) and word-of-mouth (Kim and Trail, 2011).

To be able to retain the consumer, satisfaction is not enough, it is necessary for the consumer to be happy (Cuesta-Valiño *et al.*, 2021; Khan and Hussain, 2013). There is evidence in the literature that confirms that the balance between abstract loyalty and concrete loyalty maximises the levels of consumer happiness, which demonstrates the relationship between both variables (Lyubomirsky *et al.*, 2005). It has also been proven in the field of non-profit sports organisations that happiness has a strong influence on loyalty (Núñez-Barriopedro *et al.*, 2021).

Therefore, the following hypothesis is proposed:

H5. Happiness has influence in loyalty of federated athletes.

3. Research methodology

The research design involved an exploratory study with an in-depth review of the literature, followed by a cross-sectional descriptive study by means of a survey.

3.1 Survey design

The data of this research were collected using a survey answered by a sample of Spanish federated athletes in karate. The period of collection is from March 2019 to February 2020 and the sample reached 694 valid questionnaires using Sampling Discretionary non-probabilistic by quotas. The composition of the sample is shown in Table 1. The population of Spanish

	Total of 693	%
<i>Gender</i>		
Male	493	71
Female	196	28
Non-responded	4	1
<i>Age</i>		
Less than 16	131	19
16–29	182	26
30–44	141	20
45–64	221	32
More than 64	16	2
Non-responded	2	0
<i>Years of membership</i>		
Less than 1	23	3
1–5	112	16
6–10	160	23
11–20	174	25
More than 20	222	32
Non-responded	2	0
<i>Black Belt grade</i>		
Less than Black Belt	197	28
Black Belt 1st and 2nd Dan	290	42
Black Belt 3rd and 4th Dan	147	21
Black Belt 5th and 6th Dan	39	6
More than Black Belt 7th Dan	19	3
Non-responded	1	0

Table 1.
Sample composition

Source(s): Author's own creation

federated in karate was 75,406 which implies a sampling error of 3.7% (with a 95.5% confidence interval and $p = q = 0.5$).

The survey is composed by two groups of items. The first one corresponds to demographic characteristics and the second to behaviour of respondents. For the behaviour of respondents' section, five constructors are analysed. [Table 2](#) summarises the number of items by variable.

The multiple-item measurement scales were obtained from the literature review, and they were adapted to the actual research. The scale used to obtain the 23 items was a five-point Likert-type answer format, being rated from 1 ("completely disagree") to 5 ("completely agree").

3.2 Statistical analysis

The tool used to test and analyse this research is partial least squares (PLS), which is a structural equation modelling (SEM). If the researchers intend to analyse the structural component and measurement component in one model, this tool is adequate ([Gefen et al., 2003](#)). PLS-SEM is a method based on variance technique that in many cases is more appropriate than methods based on covariance modelling techniques, as PLS is a more flexible method. The PLS-Path Modelling Method (PLS-PM) needs to validate each part of the model and that enables to avoid weaknesses in the estimation ([Vinzi et al., 2010](#)).

4. Findings

4.1 Measurement model: reliability and validity

The measure's internal consistency, reliability and discriminant validity are examined for each of the components. The five latent variables consist of reflexive items. In this study, all items reach this acceptable level of reliability because their loadings exceed 0.707 ([Hair et al., 2011](#)) and they load more on their own construct than on other items ([Table 1](#)). Cronbach's alpha and composite reliability evaluate internal consistency. According to [Hair et al. \(2011\)](#) a benchmark higher than 0.8 is considered as "stricter" reliability. As shown in [Table 3](#), both reflexive measures, Cronbach' alpha and composite reliability exceed 0.8. Discriminant validity is evaluated in two ways. AVE indicates the amount of variance captured by the constructor due to measurement error. AVE and the root square of AVE values should be greater than 0.5 ([Fornell and Larcker, 1981](#)). The values of AVE ([Table 2](#)) exceed 0.5 for each latent variable. These findings reveal that discriminant validity exists among constructors.

4.2 Structural model: goodness of fit statistics

To evaluate the structural model, [Henseler et al. \(2014\)](#) introduced the standardised root mean square residual (SRMR) as a goodness-of-fit measure for the PLS-SEM. A value below 0.10 is considered to indicate a good fit to the data ([Hu and Bentler, 1999](#)). For this model, the SRMR is 0.048.

The statistic of the model obtained through PLS algorithms shows that our index explains a large amount of variance. The main criteria for assessing model fit in PLS analysis are the R^2 values of the model ([Chin, 2010](#)), these values are 0.811, 0.701, 0.721 and 0.640 for trust, satisfaction, happiness and loyalty, respectively ([Table 4](#)). Furthermore, the Stone-Geisser statistic (Q^2) indicates that the model has predictive relevance since all the values are greater than zero.

4.3 Results of SEM

The conceptual model results (see [Figure 2](#)) show how happiness is related to each of its antecedents. With a coefficient of 0.477, the results suggest that trust influences happiness in a significant and positive way. This situation is followed by satisfaction antecedent, with a coefficient of 0.415, which is also influencing positively. Thus, it can be said that service quality

Construct	Code	Item	Sources of adoption	Loadings
Service Quality	Q_1	The activities of my federation (championships, courses, trainings, exams, etc.) run efficiently	Parasuraman <i>et al.</i> (1988), Su <i>et al.</i> (2016)	0.874
	Q_2	My federation provides a pleasant environment for the activities it organises		0.902
	Q_3	I understand that my federation charges a fair price for the activities in which I participate		0.769
	Q_4	The employees of my federation deal efficiently with my queries		0.838
	Q_5	I consider the services and activities offered by my federation as a whole to be of high quality		0.912
	Q_6	My federation has behaved in the way I expected in the activities in which I have participated		0.905
Satisfaction	S_1	I think I did the right thing when I subscribed to this federation service	Deng <i>et al.</i> (2010)	0.794
	S_2	As a whole, I am satisfied with the federation		0.928
	S_3	I am satisfied with the overall service that my federation provided to me		0.885
Trust	T_1	My federation is committed to the members to whom it provides its activities	Deng <i>et al.</i> (2010), Kim <i>et al.</i> (2011)	0.946
	T_2	My federation is honest with all federated members		0.942
	T_3	My federation cares about the members to whom they provide their activities		0.955
Happiness	H_1	Participating in the activities of my federation makes me happy	Gong and Yi (2018), Han <i>et al.</i> (2019)	0.926
	H_2	The members are happy when they participate in the activities of my federation		0.914
	H_3	The fee I paid for participating in my federation activities was worth		0.883
Loyalty	L_1	The relationship will remain intact well into the future	Fu and Wang (2021), Rauyruen and Miller (2007)	0.825
	L_2	I will recommend others to use the federation service		0.901
	L_3	Even if friends recommended another service, My preference for the federation service would not change		0.815
	L_4	I am motivated to maintain the relationship into the future		0.864
	L_5	Even there are other options to federate; I will still federate in my federation		0.900
	L_6	I will continue to participate in activities of my federation		0.816
	L_7	I will continue my activities in my federation before any other federation		0.848

Table 2. Model of reflective measures. Constructs, items, factor loading

Source(s): Author's own creation

has a strong influence in trust and satisfaction (with value coefficients of 0.900 and 0.837, respectively). Therefore, the hypotheses **H1**, **H2**, **H3** and **H4** are not rejected (see [Tables 5](#) and [6](#)).

For the hypothesis attempting to discover the relationship between happiness and loyalty, it is very clear that the relationship is strong and positive (0.80). Then, hypothesis **H5** is not rejected.

Finally, the results of the total effects on happiness and loyalty are analysed (Tables 5 and 6). In addition, it is also noteworthy to know how indirect effects influence the total effects of quality service, trust and satisfaction on loyalty (Table 7).

5. Discussion

5.1 Theoretical implications

One of the main revelations of this study is that consumer happiness can have an impact on loyalty to the organisation; this finding could create a paradigm in loyalty literature. In recent

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Service Quality	0.934	0.939	0.948	0.754
Trust	0.943	0.944	0.964	0.898
Satisfaction	0.841	0.866	0.904	0.758
Happiness	0.893	0.893	0.934	0.824
Loyalty	0.938	0.940	0.949	0.728

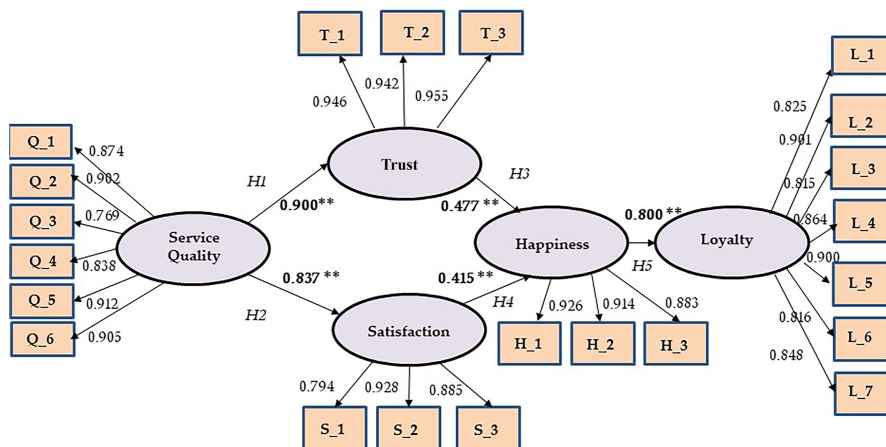
Source(s): Author's own creation

Table 3. Reliability and validity

	R-square	R-square adjusted	Q ² predict
Trust	0.811	0.810	0.810
Satisfaction	0.701	0.700	0.699
Happiness	0.720	0.719	0.722
Loyalty	0.640	0.639	0.629

Source(s): Author's own creation

Table 4. Goodness-of-fit statistics



Note(s): * $p < 0.05$, ** $p < 0.01$

Source(s): Author's own creation

Figure 2. Results

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T Statistics ((O/STDEV))	p values
Happiness → Loyalty	0.800	0.800	0.016	50.886	0.000
Satisfaction → Happiness	0.415	0.415	0.041	10.035	0.000
Service Quality → Satisfaction	0.837	0.837	0.013	66.149	0.000
Service Quality → Trust	0.900	0.900	0.009	102.307	0.000
Trust → Happiness	0.477	0.477	0.042	11.326	0.000

Table 5.
Total effect
Source(s): Author's own creation

Hypothesis	Content	Verification
H1	Service Quality has a positive influence in Trust of federated athletes	Supported
H2	Service Quality has a positive influence in Satisfaction of federated athletes	Supported
H3	Trust has a positive influence in Happiness of federated athletes	Supported
H4	Satisfaction has a positive influence in Happiness of federated athletes	Supported
H5	Happiness has a positive influence in Loyalty of federated athletes	Supported

Table 6.
Summary of hypothesis verification
Source(s): Author's own creation

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T Statistics ((O/STDEV))	p values
Satisfaction → Loyalty	0.332	0.332	0.035	9.521	0.000
Service Quality → Happiness	0.777	0.777	0.016	48.167	0.000
Service Quality → Loyalty	0.621	0.622	0.022	28.529	0.000
Trust → Loyalty	0.381	0.382	0.034	11.129	0.000

Table 7.
Total indirect effects
Source(s): Author's own creation

decades, satisfaction has mainly been studied as a source of loyalty (Easterlin, 2001). However, satisfaction is not enough to retain consumer loyalty on many occasions (Khan and Hussain, 2013), especially considering the nature of generation z, considered less loyal to brands than previous generations (Cuesta-Valiño *et al.*, 2022a; Goldring and Azab, 2021).

Hence, the importance of happiness acting as a link between satisfaction and loyalty. Happiness is the next level after satisfaction and the consequence is more loyal consumers, especially important in areas where the relationship is continuous over time, such as sports federations and their members. The results of the statistical analysis show that the path coefficient between trust and happiness is stronger than the coefficient between satisfaction and happiness. It is relevant because, in theory, satisfaction is the most common antecedent of happiness (Barra *et al.*, 2018; Ravina-Ripoll *et al.*, 2019b). Trust is also a very common constructor of happiness, but this happens especially at an aggregate level (Gong and Yi, 2018). In the results of this work, it is observed that trust is an element as fundamental as

satisfaction or more. In addition, the feeling that the organisation is doing its best to satisfy the needs, affects the happiness of the athlete as much or more than the positive feeling derived from this relationship (Yoon and Cha, 2020). This is because it is the variable from which the entire model starts and which has very strong connections with all the variables, whether direct or indirect.

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5.2 Managerial implications

Service quality is an area of special interest to managers due to the impact it has on business performance (Losada Otálora and Rodríguez Orejuela, 2007). This finding on the strong effect that service quality has over the rest of the variables of the proposed model is a useful tool for the governing boards of sports federations. If governing boards focus on strategies that improve the perceived service quality, the satisfaction and trust of federated athletes will increase, and indirectly their happiness. Some examples of these strategies could be the motivation of the employees of the federation, the creation of a wide range of activities and the efficiency in the diligence of administrative tasks. Strategies focused on improving the confidence of the athlete, such as transparency programmes in management, also determine the happiness of the federated athlete. Happiness of the athlete is important because this variable contributes to maintaining a lasting relationship with them and in maximising the sports achievements of the members, which are also achievements of the organisation.

5.3 Social implications

Federations are organisations that do not have a lucrative interest, they have a social purpose (Chen *et al.*, 2019). Athletes and the federations to which they belong are not the only beneficiaries of the growth and success of these organisations. The whole society in general also benefits. Sports federations are closely related to the public administration due to the interest that high-performance sport generates in the State, both at a regional and national level. The achievements obtained by athletes are a national competitive resource that benefit both the State and the citizens of that country.

5.4 Limitations and future research

This work has focused on a single sport modality, karate. The variables analysed and the model proposed could provide different results applied to other sports modalities with different resources. For this reason, future research intends to extrapolate the proposed model to other modalities and make a comparative analysis. Another limitation of this research is that it has been designed as a cross-sectional study, so that in future research longitudinal studies based on panel data could be developed to assess the impact of the variables assessed in the model presented in this paper. Finally, the geographical scope studied has been Spain. However, in future studies, the sample could be extended to other countries.

6. Conclusion

This research shows that perceiving high quality in the service offered by sports organizations influences the satisfaction and trust of its members directly, and the happiness and loyalty of the federated indirectly. Satisfaction and trust act as mediating variables between service quality and happiness. And happiness is consolidated as the main antecedent of the athlete's loyalty. Loyalty also receives positive influences from service quality, satisfaction and trust. This information can be very useful for the management of the federations, since it helps in making decisions focused on maintaining relationships with their athletes in the long term.

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