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SERVICE QUALITY RELEVANT ATTRIBUTES TOWARDS A FUTURE EXCELLENCE-BASED FITNESS CENTRE CLASSIFICATION IN RIO DE JANEIRO

Abstract: A survey focused on 34 specific attributes of service quality in fitness centres was applied to 657 fitness centre clients in the city of Rio de Janeiro, following a stratified sampling process. The article aims to identify the most relevant attributes of service quality, from clients' perspective, necessary for potential future excellence-based classification schemes of fitness centres in Rio de Janeiro. A quartile analysis determined that the most critical attributes, i.e., with greatest average relevance, are related to the following aspects: (i) fitness centre environment, (ii) location and access, (iii) instructors' qualifications and (iv) results of training plans, while the items considered less relevant on average concern the following aspects: (i) additional services provided by the fitness centre, (ii) social interaction promoted by the centre and (iii) administrative employees. There is no similar research on the evaluation of service quality, from users' perspective, in fitness centers in Rio de Janeiro, and there is still no consensus in literature concerning instruments for such purpose and concerning what are the most relevant attributes to customers, when assessing service quality. In accordance, this research is relevant through providing data which are necessary to construct a hierarchical classification of fitness centres in relation to the quality of services provided.

Keywords: Service quality; Attributes; Relevance; Fitness centres; Classification schemes

1. Introduction

It can be stated that in the post-industrial era, one characteristic of the economy, and therefore a source of wealth, is the predominance of economic activities connected to service provision. To the extent that services are an essential factor of the economy in practically all countries, also having an impact on the production of manufactured goods, since they give rise to different types of demands (Fitzsimmons & Fitzsimmons, 2000; Tinoco & Ribeiro, 2007; Grönroos, 2007; Ramseook-Munhurrn et al., 2010).

In service provision, most global economies have a factor that creates wealth, shown in their Gross Domestic Product (GDP) and in employment rates, which have long since overtaken income from industry and agriculture (Corrêa & Caon, 2009; Farias et al., 2018).

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Brazilian Institute of Geography and Statistic (IBGE, 2017) shows the same tendency, as for decades, services have had a fundamental role in the Brazilian economy, accounting for 75,8% of GDP in the first quarter of 2018, evidence that services are a decisive factor in the growth and vitality of the Brazilian economy.

Concerning physical exercise, there is clearly a gradual change for the worse in modern lifestyles, since the exponential development of technology, facilitating daily life, at the same time created conditions for a reduction in physical activity, increasing sedentariness and forming the contemporary lifestyle, characterised now by hypokinesia and its harmful effects, leading to a reduced quality of life and negative impacts on everyday life and health (Caber et al., 2012; Farias, 2019).

The need to include regular physical exercise in daily routines is evident, and numerous actions have led people to look for both open areas and fitness centres in their various forms (gymnasia, studios, training centres, health clubs), which provide premises where people can participate in physical activity under technical guidance, besides interacting socially (Caber et al., 2012; Cheng, 2013; Macintosh & Doherty, 2007).

This new scenario means a growing and relevant demand for the consumption of services related to regular physical activity, which can be considered primary healthcare, and from the perspective of prevention, there must be quality in that consumption relationship (Gonzalo Silvestre & Ubillos Landa, 2016; Freitas & Lacerda, 2018; Shanahan et al., 2019).

Given the importance of services in the consumer society, there must be increased quality of services as a whole (Pedro, Mendes, & Lourenço, 2018), and particularly of those in the sphere of fitness. However, quality is an attribute that is difficult to measure, since it depends on the existence of indicators that are generally intangible but highly relevant in consumers' assessment (Ko & Pastore, 2005; Grönroos, 2007; Quaresma,

2008; Farias et al., 2018).

Thus, and from the user's viewpoint in assessing quality, it is essential to consider the various intrinsic factors that should be in line with high levels of satisfaction at the precise moment of delivery, which Carlzon (1989) called the "moment of truth".

In Brazil, the demand for those services, represented by the number of centres, grew by 127% in the period 2009-2016, leading Brazil to occupy the second position in the world in the number of fitness centres per inhabitant, with 50% of all active clients in South America being located in that country. Nevertheless, the rate of permanence is only 4,6% (Brazilian Micro and Small Business Support Services [SEBRAE], 2014; Batista et al. 2016; International Health, Racquet & Sportsclub Association [IHRSA], 2018).

These numbers lead to the conclusion that Brazil is, in fact, a highly promising potential market, as there are many more people outside these centres than inside, but the demands for improved quality of life and well-being are generalized at present.

However, the search for a solution to this issue does not mean simply extending and diversifying the supply of these services. Rather, it is necessary for them to be aligned with the needs, interests and expectations of that potential clientele in order to be perceived as having the appropriate quality.

In this context, the aim of this research is to identify the most relevant attributes, from the customer perspective, necessary to construct a classification of fitness centres in Rio de Janeiro in relation to the quality of services provided.

The study is justified, firstly, by Brazil having the 2nd largest number of fitness centres per inhabitant in the world, after the USA. In addition, Rio de Janeiro is today the 2nd largest city in the country, after São Paulo, and has the largest number of these companies operating in the country (IHRSA, 2018).

Despite this vitality in the fitness sector in Brazil and the city of Rio de Janeiro, besides its potential growth, there is no indication to consumers about any type of classification of the quality of service in these companies, as happens, for example, in the hotel and catering sector.

This research is relevant by providing data which are necessary to construct a hierarchical classification of fitness centres in relation to the quality of services provided. This should be formed of a set of specific, hierarchical attributes, setting out from their relevance in the eyes of consumers.

The article is organised as follows. It begins with a review of the literature on the quality of services in fitness centres, followed by presentation of the attributes and scales used by other authors in assessing service quality in companies in this segment. A methodological description of the data-collecting procedure adopted and the statistical treatment applied is followed by the results and their discussion in the light of the literature available. The study ends with the contributions to theory and management, the conclusions and suggestions arising for future research.

2. Literature Review

2.1 Service Quality in Fitness Centres

One of the characteristics of the consumer society, established at the end of the 20th century and beginning of the 21st, is the intense competition among companies to capture and retain consumers so as to make them loyal customers, in a setting where the supply is usually similar.

In this context, companies in different business segments look for a competitive advantage over rivals, an increasingly difficult and complex task, in that consumers, especially of services, have a greater number of options to choose from associated with increasing concern about making that choice (Farias, Quaresma, Vilaça-Alves, & Neves,

2018).

Farias (2019) states that the competitive environment of contemporary society means that organisations must become increasingly efficient, effective and flexible in their production systems, under the trinomial banner of quality, productivity and flexibility.

Cronin and Taylor (1992), Crato (2010), Cunha (2016) claim that specifically in the context of the quality of service provision, it is increasingly common to create differentials between companies in the same segment, with this "bias" becoming the guiding axis of strategic decisions.

In other words, providing services of quality, or not, has come to be a synonym of prosperity or failure, respectively, leading to success in the market or otherwise depending greatly on consumers' perceptions of deficiencies in that service provision.

As for understanding the meaning of quality as a characteristic of goods or a service, Lovelock and Wright (2005), Sayers, (2012), corroborated by Farias (2019), conclude that each person has their own concept or a particular capacity to assess the quality of a product, whether goods or a service, differing only in the rigour and the parameters adopted to do so, and therefore, the non-existence of metrics and indicators or attributes hinders this assessment process.

Moreover, Pires (2012) and Brito and Lencastre (2014) highlight difficulties in measuring, despite insisting on the quality control and guarantee provided to consumers being objective and quantified. Otherwise, it becomes impossible to exercise control over production and delivery. This requires the creation of indicators to aid management of quality, which has always been part of the production environment throughout the history of human beings and their work, irrespective of the period and the way of producing goods or services.

Grönroos (2007) and Sayers (2012) and Farias et al., (2018) state that knowing customers needs and expectations is essential to be able to meet, and if possible, exceed

their perceptions, inasmuch as service quality is equivalent to a set of specific characteristics that go towards the expectations of those who buy, and who need to perceive that purchase as a positive investment that creates value for them.

Ribeiro (2006) and Lopes (2014) and Campos (2015) conclude that if on one hand the search for improvement was always a characteristic of the production world pre and post-industrial revolution, on the other, the growing speed and complexity of these changes are unique to the last decades, and thus, deserve special attention, given the consequences they bring, both in terms of the pace of requiring adaptations in content and form and in the paradigmatic changes arising from the new complexity. From new ways of doing what was already done to doing things that were never done before, the business world, above all pertaining to services, certainly needs to be reconsidered thoroughly and pro-actively.

Rosa (2016) and Farias (2019) complement this reasoning by stating that the search for improvement has always been part of the production environment throughout the history of human beings and their work, irrespective of the period and the way of producing goods or services. The attempt to "find a better way of doing things" is inherent to human beings, as even in the case of producing "things", considering needs has always been the beginning and end of everything, and so there is no "production by chance", i.e., production is to meet specific demands, whether individual or collective.

Assessing the quality of services provided, in any business segment, is an extremely relevant and highly complex activity, given the competitive context and the numerous difficulties in carrying this out, due precisely to the shortage of standards, parameters and attributes that are relevant regarding consumers' assessment (Farias et al., 2021).

Possibly the most common way of assessing service quality is by measuring the degree of satisfaction generated by these services, from

the user's perspective, those most involved in this consumption relationship (Santos, Marques, Justino, & Mendes, 2020; Cruz & Mendes, 2019), or by external assessors regarding performance of the service, following a set of criteria considered relevant for this purpose (Coulthard, 2004; Corrêa & Caon, 2009; Pires, 2012; Calesco & Both, 2019).

Among various types of business linked to health, we find fitness centres, classed as gymnasia, studios, personal training centres and similar. The number of these establishments has grown exponentially since the 1960s, partly due to the population's demand for health gains and partly due to publicity actions to make the population less sedentary.

In this segment, facing an ever-growing degree of competitiveness and a multiplicity of providers, in the search for differentiation, various strategies are adopted and efforts to capture and retain clients are part of daily life, aiming to ensure business survival and prosperity. Among those strategies, the search for differentiation through the quality of service provision has also been a growing practice (Faria, & Mendes, 2013), although methodologies to implement this are various and not always based on consistent studies (Lagrosen & Lagrosen, 2007; Moxham & Wiseman, 2009; Freitas & Lacerda, 2018; Farias et al., 2018).

On this subject, Avourdiadou and Theodorakis (2014) emphasize that although widely discussed in the business and scientific spheres, there is evidence that the general quality of a service is composed of a "cognitive construct", grounded on assessing performance in relation to an expectation and translated as a "general impression", formed by clients in their consumption relationship.

Therefore, identification of the appropriate indicators to measure service quality, through clients' satisfaction with their choices, requires a strategy to manage that quality in the light of attributes that are specific and able to confer reliability, despite the difficulty

created by the particularity of fitness centres being framed as a service-intensive business (Cheng, 2013; Freitas & Lacerda, 2018; Farias et al., 2018).

There is no doubt as to the need for these companies to go beyond capturing clients and providing them with what is essential. They must go further, study consumption and demand behaviour, to enable a design aligned with this set of particularities, able to create simultaneously pleasure and business viability (Pereira Filho et al, 2013).

In other words, if we consider that providing quality services means satisfying a set of factors that must effectively meet consumers' expectations (Discacciati, & Mendes, 2016), making them feel that the investment is worth it, it can be stated that knowing these customers' needs and expectations is an essential factor to be able to meet these expectations, and if possible go beyond them, thereby constructing competitive differences in their eyes (Grönroos, 2007; Yildiz, 2011; Sayers, 2012, Pereira Filho et al., 2013; Farias, 2019).

In this context, we can state that, from the consumer's point of view, each fitness centre is "just one more option", precisely due to being "empowered" by the exponential increase in the range of choice in recent decades.

Zequinão and Cardoso (2013) and Modesto et al., (2016) and Motta and Moraes (2017) are unanimous in stating the need to recognize the importance of keeping a focus, on production processes and improving services, and also on innovations and trends in the market, producing innovative "experiences" aiming to create higher levels of satisfaction and loyalty, attract potential clients and retain regular ones, in the midst of so much choice, creating a demand through differentiation in the provision of pleasant, innovative experiences that consumers can relate to.

Indeed, many studies have focused on measuring service quality, expressed through client satisfaction, in companies in the fitness segment, but in many of them the instruments

adopted were not specific, which means running the risk of measuring through indicators that are not always relevant for the consumption relationship under analysis, considering that the analysis should be made not by whoever builds the instruments but by those consuming the services.

Motta and Moraes (2017) and Freitas and Lacerda (2018), Farias et al., (2019) mentioned the shortage of studies focused on identifying quality attributes, which are specific and can be operationalized and measured, to assess fitness centres. This means that actions and decisions by the managers of these companies may be some way from their clients' concerns, which may lead to dissatisfaction and consequently avoidance.

So, there is a clear need to go beyond generic characteristics and attributes such as those proposed in the SERVQUAL – *Service Quality* instrument (Parasuraman et al., 1988), which aims to measure the level of quality perceived by clients in relation to 22 indicators or attributes.

In this instrument, clients are asked to evaluate the ideal situation of a service-providing company, and then evaluate that company's true performance in relation to the same performance indicators. The quality of service is thus assessed by subtracting the perceived quality in the specific company from the quality expected in the "ideal company".

In seeking to measure and evaluate the quality of service provided in fitness centres, various authors at various times and in different contexts have proposed instruments for this purpose, being formed of indicators or attributes related to their services.

However, and this is the main focus of the research presented here, none of these initiatives revealed a practical application of these instruments aiming to go beyond assessment of that quality, i.e., they do not offer consumers, or even potential clients, parameters to allow making their choices in relation to fitness services. This reveals a gap

in the quality control system of services in this business segment.

As an example of that control, the Brazilian hotel service segment has the SBClass, a hierarchical classification adopting a set of indicators related to the characteristics of their service delivery, with this being expressed by a number of "stars", giving consumers parameters for their choices.

2.2 Scales and Attributes of Service Quality in Fitness Centres

Mowen and Minor (2003) and Ferrand al., (2010) define attributes as a set of characteristics that identify a product, whether goods or a service, in the form of adjectives and/or properties that together refer to the product, giving it a specific "personality". So we can summarize them as components of services provided by a company, allowing customers to qualify their consumption experience.

Different authors claim that some attributes can have a greater influence than others, and that influence is directly related to both the type of product and the type of consumer. So, the importance of each attribute for a given type of client concerns the priority the client gives to each advantage, benefit, or result, determining their degree of satisfaction and consequently their assessment of quality (Ferraz et al., 2018).

Besides recognizing the need to evaluate service quality in fitness centres, generally through measuring customers' levels of satisfaction with a set of specific attributes, it is relevant to understand the reasons for doing so, and thus determine the purpose of knowing and measuring the importance of those specific attributes (Yoshida & James, 2010, Clemes et al., 2011, Theodorakis et al., 2013).

Lee and Kim (2011) and Theodorakis et al. (2013) are unanimous in stating that, from the service-provider's perspective, the benefit of measuring the importance clients give to their specific attributes lies in the possibility of this being a source of strategic information that can help highly relevant managerial decision-making for the business. This can be in adjusting service provision, in controlling service interactions or identifying critical attributes to define satisfactory delivery standards for what customers really identify as benefits.

We can infer that each product, either goods or a service, is observed as a sum of attributes, with certain capacities to create the benefits announced and expected, satisfy needs and expectations, which is compared with the standards of its specific consumer. It is a personal assessment of how much each attribute will be important in relation to their values and priorities (Theodorakis et al., 2013; Calesco & Both, 2019)

Zeithaml et al., (2011) and Motta and Moraes (2017) are unanimous in claiming that managers, through not knowing what is important for their companies' customers, make the mistake of investing resources in improving service attributes that customers do not consider relevant and do not even affect their perceptions of the delivery.

Cunha (2016) and Calesco and Both (2019) state that when aiming to generate improved results through more qualified delivery of service to fitness centre clients, different scales to assess service quality have been developed over time. This is directly related to improved business results, due to them belonging to a highly competitive context, where differentiation must be created.

To do so, however, it is necessary to know in detail what must be differentiated, thereby avoiding investment that does not lead to improved results due to being made in attributes that have little or no relevance for users (Modesto et al., 2016; Motta & Moraes, 2017; Farias et al., 2018).

Freitas and Lacerda (2018) and Farias (2019) mention the shortage of studies focused on identifying the relevance for customers of attributes adopted to assess the quality of services provided by fitness centres, leading to understanding that their managers'

decision-making may not always be in line with companies' real needs concerning the implementation of necessary improvements to services. This creates client dissatisfaction and consequently evasion and opens up a space for the competition.

Lovelock et al., (2011) and Lopes (2014) also concluded that choosing the most appropriate attributes for each type of service requires careful analysis of consumers' needs and expectations, as assessment will ultimately be based on the quality of what they received.

There is certainly a number of studies devoted to measuring service quality, resulting from consumers' satisfaction with fitness centres in Brazil. Many of them used instruments of a generic nature, such as SERVQUAL proposed by Parasuraman et al., (1988), which despite the major contribution made in this area of knowledge, is formed of aspects that are not always appropriate to different types of business in terms of attributes.

Besides this generalizing characteristic, Pereira Filho et al., (2013) point out that the fact of this instrument being based on the conceptual model known as Gaps Theory could lead the process of service quality assessment to polarized bias due to assessment (ideal and real) being made after consumption of the services analysed. In this context, according to the authors, records of expectations (before objective consumption) can be "induced" by experience of the services themselves (after objective consumption), when in truth it would be more reliable to measure expectations before using the service, with objective assessment only afterwards.

As observed in Table 1, based on publications in recent decades, various scientific initiatives have aimed to build instruments to assess service quality in companies in the fitness segment. There is often agreement on various attributes, meaning that some items are perceived as extremely important by whoever formed the instrument. However, there is no evidence of them having the same relevance for direct consumers when assessing service quality.

Table 1. Service Quality Attributes in Fitness Centres

Authors	Attributes
Lam, Zhang, Jensen (2005); Bodet (2006); Macintosh, Doherty (2007); Yildiz (2011); Tsitskari, Antoniadis, Costa (2014); Nuviala et al. (2013); Howat, Assaker (2016); Farias, Quaresma, Vilaça-Alves, & Neves (2018)	Cleanliness of premises
Lam, Zhang, Jensen (2005)	availability of resources to clean equipment
Lam, Zhang, Jensen (2005); Bodet (2006); Yildiz (2011); Soita (2012); Howat, Assaker (2016); Farias, Quaresma, Vilaça-Alves, & Neves (2018)	physical appearance of the premises
Morales, Gálvez (2011)	comfort of the premises
Lam, Zhang, Jensen (2005); Bodet (2006); Macintosh, Doherty (2007); Morales, Gálvez (2011); Gonçalves et al. (2014); Farias, Quaresma, Vilaça-Alves, & Neves (2018)	location of the premises
Lam, Zhang, Jensen (2005); MacIntosh, Doherty (2007); Howat, Assaker (2016); Farias, Quaresma, Vilaça-Alves, & Neves (2018)	parking availability
Bodet (2006); Macintosh, Doherty (2007); Soita (2012); Howat, Assaker (2016)	waiting time before service begins
Lam, Zhang, Jensen (2005); Macintosh, Doherty (2007); Morales, Gálvez (2011); Soita (2012); Howat, Assaker (2016); Farias, Quaresma, Vilaça-Alves, & Neves (2018)	instructors' competence

Table 1. Service Quality Attributes in Fitness Centres (continued)

Authors	Attributes
Lam, Zhang, Jensen (2005); Macintosh, Doherty (2007); Yildiz (2011); Gonçalves et al. (2014); Nuviala et al. (2013); Farias, Quaresma, Vilaça-Alves, & Neves (2018)	instructors' action in relation to problems and complaints
Lam, Zhang, Jensen (2005); Bodet (2006); Macintosh, Doherty (2007); Morales, Gálvez (2011); Soita (2012); Nuviala et al. (2013); Howat, Assaker (2016); Farias, Quaresma, Vilaça-Alves, & Neves (2018)	accuracy of information provided by instructors
Lam, Zhang, Jensen (2005); Bodet (2006); Macintosh, Doherty (2007); Yildiz (2011); Soita (2012); Gonçalves et al. (2014); Nuviala et al. (2013); Howat; Assaker (2016); Farias, Quaresma, Vilaça-Alves, & Neves (2018)	instructors' friendliness
Lam, Zhang, Jensen (2005); Bodet (2006); Soita (2012); Farias, Quaresma, Vilaça-Alves, & Neves (2018)	instructors' proximity to equipment to clarify doubts
Lam, Zhang, Jensen (2005); Bodet (2006); Macintosh, Doherty (2007); Nuviala et al. (2013); Farias, Quaresma, Vilaça-Alves, & Neves (2018)	amount of equipment available
Bodet (2006); Macintosh, Doherty (2007); Morales, Gálvez (2011); Yildiz (2011); Soita (2012); Nuviala et al. (2013)	equipment's functioning
Lam, Zhang, Jensen (2005); Bodet (2006); Morales, Gálvez (2011); Gonçalves et al. (2014)	location of equipment
Macintosh, Doherty (2007); Yildiz (2011)	Ease of using equipment
Lam, Zhang, Jensen (2005); Macintosh, Doherty (2007); Yildiz (2011); Nuviala et al. (2013); Howat, Assaker (2016); Farias, Quaresma, Vilaça-Alves, & Neves (2018)	state of equipment
Lam, Zhang, Jensen (2005); Bodet (2006); Macintosh, Doherty (2007); Yildiz (2011); Farias, Quaresma, Vilaça-Alves, & Neves (2018)	variety of equipment
Lam, Zhang, Jensen (2005); Howat, Assaker (2016); Farias, Quaresma, Vilaça-Alves, & Neves (2018)	equipment maintenance

Despite variety in the types of study, some of which were highlighted in Table 1, there is clearly no consensus as to the most important and appropriate attributes to assess service quality in fitness companies. As observed, some attributes were present in various studies, such as "location of the premises"; "instructors' competence"; "instructors' friendliness" and "amount of equipment available", among others, while some were specific to a few instruments adopted in research of the same kind, for example, "comfort of the premises" and "availability of resources to clean equipment".

To some extent, this concentration of some attributes and the rarity in using others justifies the need to go beyond generic scales such as SERVQUAL, as if attributes are not even defined unanimously in firms in the same segment, it would be even less appropriate to adopt such as scale as the "definitive solution" to bring meaning and certainty to what is relevant in assessing service quality in fitness companies (Quaresma, 2008; Farias, 2019).

Macintosh and Doherty (2007) state the relevance of these firms' managers' constant concern about knowing in detail how clients interpret the value of the services for which they are responsible. According to the authors, identifying the really relevant attributes associated with their respective influence on general satisfaction becomes more than a mere recommendation, but rather a business need.

Cudney et al., (2012) and Sheehan and Bruni-Bossio (2015) conclude that managers tend to create a competitive advantage for their

business when they are ready to provide services whose design, in content and form, has contemplated the attributes clients appreciate in their decisions to buy, continue buying and recommend to others, in a post-purchase behaviour that transforms them into a salesperson and influencer of potential customers, as proposed by Kotler and Armstrong (2015) in their theoretical model of consumer behaviour.

Therefore, the challenged posed, with unquestionable market consequences, consists of determining, from so many indicators adopted to measure service quality, those which are predominantly used by fitness centre clients to measure that quality in their assessment. From this it will be possible to construct a hierarchical classification of these companies able to provide consumers with objective criteria for their consumption choices.

3. Methodology

We used a stratified sampling procedure (Thomas et al., 2009), as the same instrument was applied to a specific group, a total number of 657 regular consumers of services in 216 registered fitness Centres in the city of Rio de Janeiro, in the period from February to May 2017 (Federal Council of Physical Education [CONFEF], 2017).

3.1 Instrument

A self-administered questionnaire was applied, formed of thirty-four items related to quality attributes of fitness centres, distributed over the following dimensions: (i) physical structures / facilities (ii) instructors / training programmes; (iii) comfort / equipment; (iv) prices / complaints / emergencies; (v) staff / appearance / image; (vi) location / access.

The instrument's internal consistency was tested through factor analysis and found to be appropriate, with Cronbach alphas of the dimensions meeting the requirement for its

use, as described by Landis and Koch (1977). The instrument was adapted from the model proposed by Pereira Filho et al., (2013), called QSAG – Service Quality in Gymnasia, adding three more, due to the specificity of the service market fitness centres in Rio de Janeiro belong to.

First, the attribute of "systematic functional assessment" (item 11) was added, due to fitness centres' obligation to have a specialist diagnose initial health and its development, in order to check and measure individuals' progress (Silva, 2006; Alves et al., 2021).

Then the attribute of "access for people with reduced mobility" (item 17) was added, due to the legal ruling in force in Brazil (Brasil, 2015).

Lastly, the attribute "social interaction" (item 33) was added due to the peculiarity of fitness centres in the city of Rio de Janeiro, being that play the role centres of socialization, as described by Anne-Lene (2004).

These items were inserted in the dimensions of the original instrument by adopting criteria of: similarity, completeness, juxtaposition, combination and specificity, which resulted in keeping the same dimensions of the original instrument, totalling 34 items, as described in Table 2.

The definitive, self-administered instrument was formed of two sections with distinct content, namely: (i) characterisation of the interviewees and (ii) assessment of the perceived quality of each attribute in the fitness centre and importance attributed to each item. Fitness centre clients marked on a Likert-type scale of 1 – 7, the importance of each attribute in assessing the quality of service provided by the centre they attended regularly.

The 7-point scale was chosen as it allowed respondents to discriminate between subtle differences in the response options without creating uncertainty or difficulties in selecting (Thomas et al., 2009).

To ensure good applicability of the instrument to be studied, it was tested in two

stages: (1) Content Assessment; (2) Test of Clarity. Content Assessment was performed by applying the conventional Delphi Technique, carried out by ten experts on the subject operating in areas related to business management, service quality and similar, two holding a master degree and eight a Ph.D., considering the requirement in terms of numbers described by Grisham (2009).

For this purpose, a numerical scale from 0 to 10 was adopted to assess the items, considering: 0 = not at all valid; between 1 and 4 = of little validity; between 5 and 7 = of average validity; between 8 and 10 = valid. Questions with an average score below 7 would be withdrawn from the instrument and those scoring 7 or more with suggestions from the assessors would be altered to meet the requirements.

Table 2. Distribution of the 34 attributes over the dimensions of the instrument

Dimensions	Attributes
D1. Physical Structure / Facilities	1. state of conservation of physical spaces 2. architecture of the fitness centre premises 3. availability of parking 4. number of changing-rooms available 8. activity schedules offered 9. variety of activities offered 10. extra services (cafeteria, personal trainer…) 17. access for people with reduced mobility 18. safety system in the fitness centre
D2. Instructors / Training Programmes	11. systematic functional assessment 19. specific training programmes 20. instructors' quality of service 21. instructors' qualifications 22. information provided by instructors 25. instructors' interest in clients' results 26. number of instructors 32. reaching the results hoped for
D3. Comfort / Equipment	5. varied, modern equipment 6. amount of equipment available 7. layout of physical spaces 13. cleanliness of the premises 14. ventilation of the premises 15. lighting of the premises 16. quality of music in classes / spaces
D4. Prices / Complaints / Emergencies	23. fitness centre's reputation in the market 24. prices charged 28. attitude to clients' complaints 29. employees' general appearance 30. capacity to cope with emergencies 31. agreements and partnerships to benefit clients 33. social interaction promoted by the fitness centre
D5. Administrative Employees / Appearance	27. administrative staff's service 34. speed in providing information to clients
D6. Location / access	12. fitness centre's location

Source: Adapted from Pereira Filho, Campos and Dantas (2013)

In fact, values above 8 were obtained for all items (8,7 < 9,8 and SD=0,55) with them all being classified as "valid" and doing away with the need to change their content.

In stage 2, the Test of Clarity (Zequinão & Cardoso, 2013), the aim was to solve inappropriateness concerning items' intelligibility, to ensure that differences in the answers would represent respondents' perceptions and points of view.

To this end, and adopting the criterion of convenience, 15 subjects were selected from the sample group, in 15 different fitness centres, aiming to test the clarity and intelligibility of the instrument. Here, the assessors should mark on a Likert-type scale from 0 to 10 points, considering zero (0) as "not at all clear" and ten (10) as "completely clear" their perceptions of the clarity of the items forming the instrument.

To analyse the answers to this test, the following classification was adopted, without previous information for the respondents: 0 = not at all clear; 1 - 4 = not very clear; 5 - 7 = of average clarity; and 8 - 10 = clear. After the answers, the questions obtaining results in the interval of "average clarity" should be reformulated while those assessed as "not very clear" or "not at all clear" should be withdrawn from the instrument.

Analysis of the test showed the instrument to be assessed as understandable, with a degree of clarity of 92% (SD=0,63), also above the threshold values considered by Zequinão and Cardoso (2013).

3.2 Sampling

The sampling process of the research began by defining the fitness centres where there would be subsequent selection of clients to apply the instrument.

The inclusion criterion was being formally registered with the professional Physical Education body, irrespective of size and location in the city of Rio de Janeiro. The information used was available on this entity's website, and of the 1271 companies included here, 865 fitness centres meeting these requirements were extracted.

Next, 25% of the total of fitness centres were chosen at random considering a sampling error of 5% (p<0,05) and a confidence level of 90%, resulting in 216 companies which were sent an invitation to participate voluntarily in the research. Besides providing an explanation of the research and its purpose, complete anonymity of the results was ensured.

Clients were also selected through an invitation to participate voluntarily, a total of 709 adult subjects, regular fitness centre clients, irrespective of gender, age and the number and nature of activities used. They should be regular users for at least 6 months, equivalent to what Saba (2001) classed as loyal clients of the company.

When the instruments were returned, 52 were eliminated due to being incomplete or with repeated answers, leaving 657 valid instruments, a response rate of 92,7%.

3.3 Data-Collection Procedures

Fitness centre clients were approached by presenting the research and its objectives, followed by scheduling of data collection on a convenient day and time when this would not interfere with their training routines.

Moreover, the instrument was always applied some minutes before or after carrying out their training activities, generally in the company's area for socialization, so as not to create difficulties in their activities.

3.4 Statistical Analysis

Data analysis, through statistical treatment, was performed using IBM SPSS v 25 for Windows, and to identify the most relevant attributes in assessing service quality, quartile analysis was adopted.

Quartile analysis is a measurement of position/classification aiming to classify items in four levels of priority (low, moderate, high, crucial) based on the items'

average importance, with the quartiles determining their limits. The averages of relevance of the 34 items were used to calculate the three quartiles determining in which of the four levels each item or attribute should be placed (Freitas et al., 2006).

4. Data Analysis and Results

The scale used, formed of 34 items, presented a Cronbach alpha of 0,792, confirming the good or substantial internal consistency of the instrument, according to Landis and Koch (1977), and confirming that the items of the instrument measure the same construct.

Regarding the distribution of the attributes over the dimensions presented in Table 3, the values found for the Cronbach alpha coefficient reveal internal consistency classified between substantial (0,80 – 0,61) and reasonable (0,21 – 0,40) according to Landis and Koch (1977), as presented in Table 3.

Table 3. Average relevance of the attributes / dimension and Cronbach alpha

Dimension	M ± SD	N. items	Cronbach α
D1 physical structure /premises	5,40 ± 0,79	9	0,628
D2 instructors/training programme	5,91 ± 0,65	8	0,433
D3 comfort/equipment	6,38 ± 0,41	7	0,274
D4 prices/complaints/emergencies	5,31 ± 0,84	7	0,535
D5 administrative staff/appearance	5,36 ± 1,30	2	0,413
D6 location/access	6,65 ± 0,81	1	

Source: the authors   (M= Mean; SD= Standard Deviation)

Continuing to analyse the results and aiming to check whether the dimensions present different average relevances per item, the analysis of variance of repeated measurements was used. The Mauchly test showed that the assumption of sphericity was not confirmed ($\chi 2(14) =1154$; $p<0,001$), and so the degrees of freedom were corrected using the Huynh-Feldt sphericity estimate ($\varepsilon=0,577$), since the dataset is large (Maroco, 2011).

To refine the analysis, and after calculating the quartiles of the average relevances per item, locations were identified at the level of critical priority (with average relevance above the third quartile), high priority (with average relevance between the second and third quartile), moderate priority (with average relevance between the first and the second quartile) and low priority (with average relevance under the first quartile). Table 4 presents the results of the quartile analysis.

5. Discussion of the Results

Knowing in as much detail as possible about the aspects involved in clients' assessment of the quality of service provided by fitness centres is undoubtedly a factor of business competitiveness and prosperity, as stated by Pradeep et al. (2020).

Besides allowing a direct influence on the consumer's behaviour, which means knowing how individuals and groups choose, acquire or reject services or even experiences to meet their needs and wishes, knowing the characteristics and criteria of consumer choice allows companies to propose more appropriate goods or services.

On the other hand, not knowing what is in fact relevant for the client creates vulnerability in relation to the competition, in that consumers easily communicate the weaknesses in the services they pay for, performing the role of initiators and influencers of potential clients or even of other regular clients, in the "post-purchase behaviour" describd in the theoretical model proposed by Kotler and Armstrong (2015).

Evidence of this was a study made in Rio de Janeiro by Farias (2019), which showed that 75,7% of fitness centre clients paid for plans of up to 12 activities, but used a maximum of 4 of them, showing these companies have higher fixed costs than is necessary, which certainly has an impact on the prices set for these services.

In accordance, It can be stated that knowing the relevance of a specific set of service attributes for users helps business management and makes the company more competitive (Bodet, 2006; Freitas & Lacerda, 2018).

Table 4. Description of the attributes by levels of priority after the quartile analysis

Distribution of items by levels of priority			M
Priority	**Critical**	R15. lighting of premises	6,89
		R1. state of conservation of physical spaces	6,80
		R32. reaching the results hoped for	6,74
		R13. cleanliness of premises	6,71
		R12. location of the fitness centre	6,65
		R21. instructors' qualifications	6,63
		R20. quality of service from instructors	6,60
		R14. ventilation of premises	6,46
	3rd Quartile: 6,46		
	High	R7. layout of physical spaces	6,46
		R6. amount of equipment available	6,36
		R22. information provided by instructors	6,36
		R25. instructors' interest in clients' results	6,30
		R5. varied and modern equipment	6,23
		R8. activity schedules offered	6,20
		R28. attitude to clients' complaints	6,14
		R24. prices charged	5,97
		R19. specific training programmes for people's needs	5,95
	2nd Quartile: 5,90		
	Moderate	R34. speed of providing information to clients	5,84
		R9. variety of activities offered	5,68
		R16. quality of music used in classes/premises	5,54
		R2. architecture of fitness centre premises	5,43
		R23. fitness centre's reputation in the market	5,39
		R18. fitness centre's security system	5,38
		R30. capacity to cope with emergencies	5,34
		R4. number of changing rooms available	5,26
		R29. staff's general appearance	5,24
	1st Quartile: 5,16		
	Low	R3. availability of parking	4,92
		R27. service from administrative staff	4,87
		R10. extra services (cafeteria, personal trainer...)	4,86
		R31. agreements and partnerships to benefit clients	4,73
		R26. number of instructors	4,38
		R33. social interaction promoted by the fitness centre	4,33
		R11. systematic functional assessment	4,32
		R17. access for people with reduced mobility	4,10

Source: the authors   (R= responses to item M = average)

Despite the clear increase in recent decades in the number of studies on consumer satisfaction, loyalty and evasion in relation to fitness centre services in different states and cities in Brazil, there is a shortage of studies aiming to identify and analyse those service attributes with the greatest influence on users' assessment of service quality. Particularly, in Rio de Janeiro, where this research took place, no study of that nature was found.

This research intended to fill this theoretical gap and contribute to the literature, by studying the relevance consumers give to a set of attributes related to fitness centre services, to help construct a classification of those centres regarding service quality.

The quartile analysis confirmed that the most critical attributes, i.e., those with greatest average relevance, are related to: (i) fitness centre environment, (ii) location, (iii) instructors' qualifications and (iv) results achieved through training plans.

These results confirm those found by Yildiz and Kara, (2012), Freitas and Lacerda (2018) and Macon (2020) in similar studies made in fitness centres, the authors identifying as attributes with the highest average relevance training premises or environment, representing clients' perception that aspects related to the physical environment such as "cleanliness and conservation", "lighting" and "ventilation" are in fact relevant in their assessment of service quality.

All these attributes are part of health and well-being, precisely what people seek to improve when consuming fitness services (Freitas & Lacerda, 2018; Farias, 2019; Álvarez et al., 2019).

The positioning of items related to instructors' qualifications as also being of greater average relevance corroborates the findings of Motta and Moraes (2017) and Lacerda (2018) and León-Quismondo et al. (2018), who conclude that their "qualifications", associated with the "quality of service" provided to clients are critical success factors of service companies, precisely by depending on the interpersonal interaction being transformed into consumption (Lovelock & Wright, 2005; Lovelock et al., 2011; Howat & Assaker, 2016).

Similarly, and corroborating the results found, we have the study made by Burillo et al., (2012), where instructors' attentiveness and flexibility were considered highly relevant, from the client perspective, in assessing service quality in fitness centres.

In addition, the placing of aspects linked to location and access as being highly relevant confirms the findings of Freitas and Lacerda (2018), Lacerda (2018) and León-Quismondo et al., (2018), who conclude that clients do not want to waste much time when going to train, with this being an attribute involved in consumers' choice of fitness centres.

This result is also supported by the findings of Linhares and Freitas (2011), who suggest the marketing area should pay special attention to the process of attracting potential clients, focusing more on those who live or work in the proximity of the fitness centre.

Outside the context of physical training centres, Martínez-Caro et al. (2014), studying football clubs in Murcia, Spain, found a high degree of relevance of attributes related to instructors' politeness when dealing with their clients.

As for the items given a low level of priority, i.e., with less average relevance, these are related to: (i) extra services provided by the fitness centre, (ii) social interaction promoted by the centre and (iii) administrative staff.

Regarding the items related to extra services, the results corroborate those of Linhares and Freitas (2011), Motta and Moraes (2017) and León-Quismondo et al., (2018), who in similar studies report the perception of low priority for extras provided to clients such as a cafeteria or shop, considered "peripheral services" by the last authors.

Concerning the social interaction promoted by fitness centres, few studies consider this attribute in clients' assessment of service quality. In one of them, and comparing with

the results found here, León-Quismondo et al., (2018) report a high level of importance attributed by fitness centre clients in Madrid, being a factor with a direct influence on their loyalty to the company and its services.

Also contradicting the results obtained here, a recent study by Modesto et al., (2016) reports that interaction among clients plays a relevant role in their choice of physical training centre in Rio de Janeiro. This is precisely due to being an environment conducive to collective practices, even in individual activities, which favours interaction and interpersonal relations.

In addition, the low priority attributed to the quality of service provided by the administrative team to clients goes against similar studies by Lima et al., (2018) and León-Quismondo et al., (2018), who describe failings in these people's service as being major causes of clients' evasion, due to the interpersonal interaction predominating in the consumption relation of services provided by these companies.

6. Conclusions

Briefly, the results of the research lead to the conclusion that the most relevant aspects for consumers of fitness services in the companies studied in Rio de Janeiro have to do with the environment of these places, their location in the city, instructors' action and the results of their physical training programmes in these clients' lives. On the other hand, the social interaction promoted by fitness centres, the extra services they offer and the action and service provided by administrative are of little relevance for the consumers studied, which does not agree with other studies of the same nature.

It is relevant to consider that given those results in Rio de Janeiro, the growing competition between those firms, irrespective of their size, location and the range of activities on offer, does not come down simply to the quality of physical spaces and the amount and modernity of the equipment available to clients.

Certainly, delivery comes to be perceived differently by the consumers of these services. They give relevance to dimensions that in the past would not warrant their managers' attention but today are among the factors creating differentiation in the market. A current example of this scenario is CrossFit™ Boxes or Functional Training, with exponential growth in Rio de Janeiro, which is now in second position in the number of Boxes after the USA, with 1.055 units, Rio de Janeiro being the city with the largest number of units in operation.

Even providing only one form of training, these centres have become a direct competitor of traditional fitness centres, their training plans having characteristics linked to increased motivation and satisfaction of participants' basic psychological needs of connection and autonomy, attributes that favour taking up and remaining in the activity (Dominski et al., 2019).

Thus, and considering that service quality is a differential factor in companies' survival and prosperity in this segment, this research aimed, through an exploratory study, at verifying the relevance of an attributes set acting as performance indicators in evaluating service quality from users' perspective, filling thus a gap in this area of knowledge, because there is no similar study carried out in fitness centers in Rio de Janeiro, and because there is no consensus in literature concerning the attributes of greatest relevance for evaluating the quality of services provided by these companies to society in Rio de Janeiro.

6.1 Theoretical Contributions

Various studies have been carried out, especially in recent decades, aiming to identify attributes with an influence on the quality of service provided by fitness centres and consumer satisfaction.

However, few studies have been dedicated to investigating which attributes play the most

relevant role in users' perception of these services in Rio de Janeiro, turning evident a need for further research and, therefore, this study had such purpose, and managed to help in filling somehow this theoretical gap.

In addition, it is important to highlight that the 34 attributes consideredin this study proved to be adequate to measure the quality of services from users' perspective, although, even considered highly relevant, some of these attributes were not adopted in similar research carried out previously.

In this research, the Cronbach's alpha values indicated that the questionnaire is valid and reliable for exploratory studies, with a global value equal to 0.792, which confirms the good or substantial internal consistency of the instrument according to Landis & Koch (1977), and thus allowing to consider that the instrument's items are adequate to measure the service quality construct. In adition, acording to Cronback's alpha values for each dimension, the distribution of attributes by dimension indicated an adequate internal consistency for this study, according to Landis & Koch (1977).

The factor analysis and the quartile analysis applied in this study allowed to identify that the most relevant attributes are linked to the ambience of spaces, to the geographic location of centers in Rio de Janeiro, to instructors' attitude, and to results reached through prescribed physical training programs.These results confirm findings from Yildiz (2011) and Freitas and Lacerda (2018), but diverge from Albayrak and Caber (2014), whose research highlighted "workout facilities" and "staff" as most relevant for users, and from Vieira and Ferreira (2017) who highlighted "instructors' competences".

Thus, the research makes it clear that there is no consensus in literature concerning assessment instruments and relevance of service quality attributes in fitness centers, which suggests the development of further similar studies, applicable in small, medium, and large fitness companies, as well as in different social strata, in order to identify

attributes common to the different contexts of this business segment.

6.2 Contributions to Management

This research provides contributions of great relevance for managers of fitness centers in Rio de Janeiro, but also for instructors, because knowing the attributes that are more relevant to user, allows them to undertake actions (both managerial and operational), capable to improve users' satisfaction, and thus to gain their loyalty towards the company, creating competitive differentiation, and turning companies less vulnerable to competition and, consequently, more profitable and sustainable.

In addition, findings in this research demonstrates to managers the need to carry out systematic studies centered on users, concerning what are, in fact, the relevant attributes in their relationship with the company that provides them fitness services, as well as the need to regularly share these results with all stakeholders, as a way of generating harmony in the understanding of these attributes that can effectively interfere with user loyalty and retention, and thus, with the business sustainability.

Another relevant contribution of the study is that it demonstrates to managers the importance of dedicating differentiated and careful attention to the following issues: management of facilities, arrangement/organization of equipment, general ambience of the center, as well as instructors' training in issues related to business management. We beleve that, through paying attention to these issues, service quality in fitness centers in Rio de Janeiro will improve, and users' perception about this quality will occur, leading to a higher retention and loyalty, and also to the attraction of new users, who can be influenced by satisfied users.

6.3 Limitations and Research Proposals

Due to being carried out in a major urban centre, with characteristics that may be different from those in other regions of the country with different attributes of relevance or clients with a different behaviour from those studied here, we recognize that the results presented here cannot be generalized, but they are a reliable representation of fitness centres in the city of Rio de Janeiro.

Finally, the research suggests extending this line of investigation to fitness centres of different sizes, in different places in Brazil and with different client profiles, in order to generate data to help particular managerial action in each context, and avoid generalizations that prevent correct understanding of the situation in this business segment with an undeniable impact on the country's economy.

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