



## CUSTOMER PERCEPTION ABOUT THE QUALITY IN AN À LA CARTE RESTAURANT: AN EXPLORATORY ANALYSIS

André Luís Policani Freitas <sup>a</sup>; Marta Duarte de Barros <sup>b</sup>

<sup>a</sup> North Fluminense State University

<sup>b</sup> Candido Mendes University – Campos dos Goytacazes/RJ

### Abstract

Currently, tourism is one of the most promising economic activities. It's success depends on a number of service sectors, including the restaurants. Several studies have been developed in order to assess the quality of services in restaurants searching to identify needs, expectations and most important attributes according to customers' point of view. However, often these studies consider different dimensions and attributes, focusing on properties with specific characteristics, such as à la carte and self service. To contribute to the analysis of the problem, this article used a methodological approach based on existing models and studies to assess the quality of a restaurant regarding dimensions and items inherent to the segment, as perceived by customers. The study was conducted in a la carte restaurant located in a municipality of Rio de Janeiro. The use of the Alpha Coefficient of Cronbach showed that all dimensions were considered reliable. The results revealed that several critical items are associated with environmental conditions (servicescapes), as well as items related to facilities provided for people with special needs. It is believed that the approach is applicable to quality evaluation for other types of restaurants.

**Keywords:** Services quality; Services in restaurants; restaurants a la carte.

### 1. INTRODUCTION

Over the years, an increasing number of destinations has invested in tourism development, making the modern tourism a key element for socio-economic progress by creating jobs and businesses, infrastructure development and export revenues received (WTO, 2012).

The tourism sector occupies a relevant role in the world economy as one of the most promising activities and more economic representation, beside of the oil industry (BNDES, 2005). However, its success depends on several service sectors such as transport (air, road, maritime, etc.), lodging and, in particular restaurants.

In this context, the measurement of services quality provided in restaurants has been the subject of interest of several studies lately. Among other objectives, such studies seek to identify factors that influence the performance of services (Min et Min, 2011; Smith et al, 2009; Tinoco et Ribeiro, 2008) and analyze how the physical environment of

the restaurants influences satisfaction and loyalty consumer (Ryu et Han, 2011; Ha et Jang, 2010; Kim et Moon, 2009).

However, most of these studies has different dimensions and attributes, focusing on properties with specific characteristics, such as a la carte restaurants, fast food and self-service. There is the inability to implement results due to the difference between the existing realities in the different types of restaurants.

Desiring to contribute to the treatment of the problem in question, apply a methodological approach based on existing models and scientific studies to measure the quality of services provided by restaurants regarding dimensions and items (criteria) associated with infrastructure, services rendered and environmental actions taken, as perceived by customers. An experimental study was conducted in order to (i) measure quality in a la carte restaurant located in a municipality of Rio de Janeiro; (ii) to verify the reliability of the data collection instrument through the use of Cronbach Alpha Coefficient; (iii) identify the items



considered most critical as perceived by customers and (iv) to capture the view from the restaurant manager on the results obtained and also possible corrective actions that can be implemented.

In addition to this introductory section, the article presents issues related to the evaluation of the quality of services in restaurants; a brief description of the adopted methodological procedures; the description of the experimental analysis and the results achieved and, finally, the conclusions and managerial implications.

## 2. SERVICE QUALITY IN RESTAURANTS

The restaurant segment is characterized as an activity predominantly of services. According to Freitas (2005), although much discussed in scientific research, the theme "Quality Services" is still the subject of many discussions, possibly due to the involvement of two objects of understanding not as trivial: quality and service. In order to help understanding the meaning of "services", researchers have identified characteristics related to this issue, which are:

- **Heterogeneity:** services are heterogeneous; the result of its performance often varies from employee to employee, from client to client, from day to day (Parasuraman et al., 1985). According to Freitas (2005), the wide range of existing services and the strong relationship with the human factor difficult the standardization activity and price estimation.
- **Inseparability:** the production and consumption of most services are inseparable (Parasuraman et al., 1985). Services are operated as open systems, i.e., all impact of variations in demand are transmitted to the system. This feature makes it difficult to intervene in quality control and, as reported by Freitas (2005), makes it difficult or nearly impossible to detect and correct failures before they occur and affect the customer.
- **Intangibility:** services represent a non-physical product, ie, can not be counted, measured, tested and stored prior to its implementation in order to ensure the quality (Parasuraman et al., 1985). I.e., according to Zeithaml et al. (2006), services are perishable.

These characteristics are present in the services provided in restaurants. For example, tables that were not occupied by customers can not be allocated to another time (intangibility) - which characterizes loss of opportunity, unforeseen changes in food composition or restaurant occupation can affect the customer (inseparability) - and the employee attendance can vary at certain times (heterogeneity).

Service is an experience that takes place on the premises of an organization and is influenced by environmental conditions. According Bitner (1992), the physical environment, the design of the facility (interior design, furniture, signage, layout), noise or surround sound, temperature, among other things, are called servicescapes and can influence employee performance and quality of service perceived by the customer.

In the evaluation of services in restaurants, several studies have been conducted in order to identify the attributes that influence product purchasing decisions (Shaharudin et al, 2011). To examine how the perception of consumers in relation to the physical environment influences service quality, customer satisfaction and customer loyalty (Ryu et Han, 2011; Ha et Jang, 2010; Kim et Moon, 2009), measure performance and identify factors that influence the performance of services (Min et Min, 2011; Silva et al, 2009; Tinoco et Ribeiro, 2008).

However, note that there is not consensus of which dimensions are more suited to the measurement of service quality in restaurants, which is one of the main issues of interest to administrators, managers and researchers in the areas of quality services, marketing, tourism and hospitality.

According to Freitas and Almeida (2013), this problem has increased its complexity because there is no consensus on the items or criteria to compose each dimension of quality (in terms of meaning and quantity) and there is no better way to measure the quality of services (conceptual model). Can be capturing the perceptions of performance or expectations, the customer satisfaction in relation to services rendered or any relationship between these modes. The SERVQUAL scale (Parasuraman et al, 1988, 1991.), based on obtaining the difference (gap) between performance and expectations (P - E) in the perception of consumers regarding the five dimensions of quality (distributed in 22 items in their original version), has been the conceptual scale most commonly used to evaluate various kinds of services despite existing criticism. Cronin et Taylor (1992) states that SERVPERF scale, based only on measures of performance perception of service, would be more appropriate for assessing the quality of services because the gaps do not bring additional information about it.

## 3. THE METHODOLOGICAL APPROACH

Chart 1 shows the dimensions considered for the evaluation of quality in restaurants, present in Barros et Freitas (2012, 2013) and obtained from models and scientific studies.



**Chart 1** - Dimensions considered in the methodological approach.

Dimensions
Reliability (D1): Quality dimension of Parasuraman et al. (1988) and Cronin et Taylor (1994), reliability is the ability and capacity to perform a promised service without errors.
Receptivity (D2): Quality dimension of Parasuraman et al. (1988) and Cronin et Taylor (1994). It is the willingness to help customers, characterized by: personal attention, fast service, effectiveness in solving problems and the delicacy of employees.
Security (D3): Quality dimension of Parasuraman et al. (1988) and Cronin et Taylor (1994). Adapted for the service evaluation in restaurants, it is important about storage and handling of foodstuffs.
Empathy (D4): Quality dimension of Parasuraman et al. (1988) and Cronin et Taylor (1994). Is the individualized attention to customers using the restaurant service. It includes efforts to meet the specific needs of customers.
Product Quality (D5): It refers to the dimension of quality proposed by Shaharudinet al. (2011) and Jang et Namkung (2009). Presentation is associated on how the food is been prepared and presented to consumers. When the food is well prepared can attract the feeling for food consumption. Then will help to create a good relationship and emotional bond between the client and who serves the food.
Atmosphere Conditions (D6): They include environmental characteristics such as temperature, lighting, noise, smell, music. For example, studies in restaurants have shown that the rhythm of music can affect the permanence and amount of money spent (Bitner, 1992; Wakefield et Blodgett, 1999; Ryu et Jang, 2007; Kim et Moon, 2009; Ryu et Han, 2011).
Cleaning (D7): Many consumers implicitly associate cleanliness with the quality of servicescape. For example, cleaning floors and carpets, bathrooms that are disinfected and trash cans that are continuously emptied can influence the perceived quality of service (Wakefield et Blodgett, 1996).
Facilities (D8): refers to architectural design, along with interior design, which contributes to environmental attractiveness (Wakefield et Blodgett, 1996). Other aspects of interior design such as furniture, pictures and/or paintings, plants and/or flowers, or wall hangings can also serve to improve the perceived quality in dining environments, creating emotions (pleasure and excitement) on a client (Ryu et Jang, 2007; Jang et Namkung, 2009; Kim et Moon, 2009; Ryu et Han, 2011).
Layout (D9): In restaurants, layout refers to the way halls and walkways, food service lines, bathrooms, and entrances and exits are arranged correctly and organized (Bitner, 1992; Wakefield et Blodgett, 1996; Ryu et Jang, 2007; Kim et Moon, 2009; Ryu et Han, 2011).
Electronic Devices (D10): electronic devices are used to deliver and improve the supply of primary service. They are used to display information and entertain clients while providing services, making the waiting time enjoyable (Wakefield et Blodgett, 1996,1999; Kim et Moon, 2009).
Seat Comfort (D11): upholstery, backrests and fabric/heat seats (Wakefield et Blodgett, 1996; Kim et Moon, 2009).

Service Staff (D12): It includes the appearance, number and gender of employees. The interactions between the service staff and customers are not considered as elements of the physical environment, since they are not tangible quality attributes (Ryu et Han, 2011). A professional employee can transmit the organization image for a customer closer and personal. For Baker et al. (1992), social signals (for example, number and appearance of staff) influence the emotions of customers positively. Similarly, Ryu et Jang (2007) supported the strong influence that employees have in the perception of service.

Table Settings (D13): Fancy restaurants should be designed to deliver a prestigious image to attract high class customers. For example, cutlery, crockery, glasses and high quality linens can be effective tools to influence the perception of customers. According to Ruy et Han (2011), this dimension has been largely ignored in the literature because it is valid only for fancy restaurants.

Environmental Actions (D14): this dimension refers to items related to environmental management (Gil et al., 2001; Khan, 2003; Mensah, 2006; Erdogan et Baris, 2007).

Source: Own elaboration.

The dimension "Accessibility for people with special needs" was added to the others. It developed a data collection tool (questionnaire), divided into three blocks.

- **Block 1:** aims to collect information related to the profile of the respondents.
- **Block 2:** brings together 15 dimensions containing 59 items to be analyzed by the respondents through a range whose values range from 0 (zero, very bad) to 10 (ten, very good). Is used N/A if you can not evaluate an item, and N/E if the item is not understood. It seeks to prevent the respondent select any value (usually the central range), simply answer, influencing the analysis of the items.

**Chart 2** - Dimensions and items considered in the study.

Dimensions	Items
D1 Reliability	I1. Restaurant performs the service in the promised time.
	I2. When you have a problem, the restaurant shows a sincere interest in solving it.
	I3. The restaurant executes the correct service on the first time.
	I4. The restaurant takes the requests and final bill without mistakes.
	I5. Features correct information on its menu.



D2 Receptivity	I16. The service staff tells exactly how long the services will be performed.
	I17. The service staff attends quickly.
	I18. The service staff is always willing to help you.
	I19. The service staff is never busy to fulfill your requests.
D3 Security	I10. The behavior of service staff convey confidence for customers.
	I11. You feel safe with food and services provided by the restaurant.
	I12. The service staff is courteous to you.
	I13. The service staff has knowledge to answer customers questions.
D4 Empathy	I14. The restaurant gives you individual attention.
	I15. The opening hours of the restaurant are convenient for the consumer.
	I16. The restaurant has employees who give you personal attention.
	I17. The restaurant has the best interest to serve you.
D5 Product Quality	I18. The service staff understand their specific needs.
	I19. The food quality is noticeably attractive.
	I20. The restaurant offers healthy options.
	I21. The restaurant serves tasty food.
D6 Atmosphere Conditions	I22. The restaurant offers fresh food.
	I23. The level of the restaurant lighting is appropriate.
	I24. The temperature in this restaurant is comfortable.
	I25. The aroma in the restaurant is pleasant.
D7 Cleaning	I26. The sound in the atmosphere makes the restaurant a nice place.
	I27. This restaurant keeps clean bathrooms.
	I28. This restaurant keeps the kitchen clean.
	I29. This restaurant keeps the entrances and exits clean.
D8 Facilities	I30. Overall, this restaurant is kept clean.
	I31. The design of the facilities makes the restaurant attractive.
	I32. The restaurant decor is attractive.
	I33. The colors used create a cozy atmosphere.
	I34. Furniture (table, chair) are quality.

D9 Layout	I35. Parking (existence and size of the waves, room to maneuver).
	I36. In this restaurant, the corridors between the tables there is enough room to move around easily.
	I37. The signage in the environment of this restaurant provides adequate guidance.
	I38. It is easy to walk in the ambiance of this restaurant and find what you need.
D10 Electronic Devices	I39. The number of tables makes the environment of this restaurant easy to walk.
	I40. Devices (TV, CD, DVD) make this restaurant interesting.
	I41. Devices (TV, CD, DVD) add 'emotion' to the place.
D11 Seat Comfort	I42. Devices (TV, CD, DVD) contribute to entertainment.
	I43. The seat of this restaurant allows me to sit at a comfortable distance.
	I44. Seats in this restaurant are comfortable.
D12 Service Staff	I45. It's easy to get in and out of their seats in the restaurant.
	I46. The employees are well dressed and armed.
	I47. Employees make me feel good.
D13 Table Settings	I48. An adequate number of staff makes me feel well attended.
	I49. Glasses, plates, cutlery are quality.
D14 Environmental Actions	I50. Tablecloths and napkins are attractive.
	I51. Generated waste control (eg, selective collection).
	I52. Waste control equipment (lighting sensors and water).
D15 Accessibility for People with Special Needs	I53. Disclosure of information related to environmental issues.
	I54. Access (through ramps, stairs, handrails, elevator, tactile floor).
	I55. Circulation (suitable furniture and floors, lowering the sidewalks).
	I56. Adapted bathrooms.
	I57. Communication (signaling sanitary, route in displacement direction), adapted menus (Braille).
	I58. Parking for special needs.
I59. Staff trained to meet the special needs.	

Source: Own elaboration

- **Block 3:** space dedicated to collect criticism and/or suggestions and the note to the overall performance of the property.



The  $\alpha$  Cronbach coefficient (Cronbach, 1951) was used to measure the reliability of the questionnaire in each dimension and also to identify possible items that, if excluded, would increase the reliability of the questionnaire.

The quartile analysis (Freitas et al., 2006) was used to identify the most critical items. According to this analysis, quartiles are interpreted as values that separate each priority level (critical, high, moderate or low). Items are considered critical when the average performance of a restaurant is less than the first quartile, i.e., are items that need to receive urgent corrections to improve the quality. Items in average performance between the first and second quartile are defined as high priority items, items whose average performance is between the second and third quartile are considered items of “moderate priority” and, finally, the items whose average performance is higher than the third quartile are considered low priority. The items identified as more critical were presented to the restaurant manager in order to determine corrective actions aimed at improving the quality of establishments.

#### 4. EXPERIMENTAL STUDY

The study was conducted in a la carte restaurant located in the municipality of Macae, in Região dos Lagos, Rio de Janeiro. The municipality stands out for the large number of tourist attractions in terms of natural beauty and also in terms of business tourism, the presence of numerous companies and as one of the main access to oil platforms in the Baía de Campos. Opened in 2002, currently the restaurant has 10 employees.

During the search, a large variation in the number of clients in the property was observed, because at certain times predominated individual requests (for a single client), and others, to several people who were gathered at one table. However, it estimated an average daily number of 150 customers.

The used sampling was a non probabilistic with approach by convenience, ie, the selection of respondents was defined from the ease of access to the elements by the researcher (Malhotra, 2006). In this study, this sampling procedure was used in preference to the use of probabilistic sampling due to the unavailability of the entire population of clients to be drawn (step that characterizes a probabilistic sampling). Moreover, the audience is very diverse, because the restaurant gets employees of numerous companies located in Macaé for lunch, business meetings and social gatherings, as well as tourists. It adds also that many customers, when approached by the researcher chose not to participate in the study, mainly due to lack of time.

Each respondent used a printed questionnaire to assign values indicating their perception of restaurant performance. Data collection occurred for 10 consecutive days and the average time of instrument response was 10 minutes. The study included 74 guests; 71 questionnaires were considered valid.

Table 1 shows the distribution of data frequency. Note that the male and female respondents are well distributed, being approximately 46% and 53%, respectively. Only 14% of respondents reported having a monthly income less than R\$ 1,000.00; 79% have 25 years or more, 58% have higher education, and 68% of respondents attend the restaurant more than once a week. Data relating to the last three aspects can contribute to a good credibility of the answers.

**Table 1** - Characteristics of respondents

Answers of each response category (%)				
Genre				
Masculine (46,48)	Feminine (53,52)			
Age groups (years)				
18 a 24 (21,12)	25 a 34 (22,54)	35 a 44 (35,21)	45 a 60 (16,90)	61 a 80 (4,23)
Monthly income (R\$)				
0 a 999,99 (14,08)	1.000,00 a 1.999,99 (21,13)	2.000,00 a 4.000,00 (38,03)	> 4.000,00 (26,76)	
Visit frequency				
Rarely (9,86)	Once a week (22,54)	2 or 3 times a week (43,67)	4 to 6 times a week (18,31)	Every day (5,62)
Education level				
Middle school (2,5)	High School (22,5)	Graduation (45,0)	Post-Graduation (30,0) (30,0)	

Source: own elaboration

Table 2 shows the frequency of N/A-N/E responses, restaurant performance accounted (Average Performance of each item  $(-D)_i$ , the average performance of each dimension  $(-D)_j$  and overall performance  $(-D)_c$ ), Cronbach's  $\alpha$  value for each dimension and also the alpha value of each dimension, if an item is deleted from the questionnaire. Unanswered items or marked as “not rated” were replaced by the average performance of item. According to Freitas et Rodrigues (2005), this is one of the most widely used by professional statistical packages. It is important to note that a significant number of respondents marked N/A for items related to parking, kitchen cleaning and environmental actions by these do not exist or are not perceived. Only one item was not understood by the client.



**Table 2** - Average performance and reliability coefficient.

Dimension	Item	N/E	N/A	( $\bar{D}$ )_i	( $\bar{D}$ )_D	Alpha	Alpha if the item is excluded
D1 Reliability	I1	0	0	9,15	9,38	0,778	0,713
	I2	0	10	9,31			0,695
	I3	0	1	9,43			0,729
	I4	0	2	9,43			0,725
	I5	0	2	9,55			0,814
D2 Receptivity	I6	0	7	8,59	8,85	0,760	0,724
	I7	0	0	9,20			0,691
	I8	0	2	9,23			0,602
	I9	0	3	8,37			0,792
D3 Security	I10	0	1	9,40	9,46	0,755	0,745
	I11	0	1	9,41			0,704
	I12	0	0	9,59			0,608
	I13	0	0	9,45			0,658
D4 Empathy	I14	0	7	9,03	9,00	0,846	0,807
	I15	0	1	9,10			0,858
	I16	0	12	8,56			0,786
	I17	0	0	9,15			0,777
	I18	0	6	9,14			0,826
D5 Product quality	I19	0	0	9,42	9,40	0,970	0,958
	I20	0	0	9,23			0,977
	I21	0	0	9,45			0,951
	I22	0	0	9,49			0,953
D6 Atmosphere Conditions	I23	0	1	8,36	8,45	0,843	0,820
	I24	0	1	8,11			0,754
	I25	0	1	8,56			0,788
	I26	0	5	8,76			0,828
D7 Cleaning	I27	0	4	9,00	8,93	0,752	0,613
	I28	0	38	8,91			0,859
	I29	0	1	8,94			0,551
	I30	0	1	8,86			0,634
D8 Facilities	I31	0	1	7,14	6,65	0,913	0,879
	I32	0	1	6,87			0,863
	I33	0	1	6,74			0,867
	I34	0	1	8,03			0,908
	I35	0	16	4,45			0,938
D9 Layout	I36	0	1	7,54	7,67	0,945	0,932
	I37	0	4	7,48			0,940
	I38	0	1	7,93			0,923
D10 Electronic Devices	I39	0	0	7,72			0,916
	I40	0	1	7,93	7,64	0,922	0,915
	I41	0	5	7,35			0,902
D11 Seat comfort	I42	0	3	7,63			0,842
	I43	0	0	8,39	8,28	0,930	0,836
	I44	0	0	8,45			0,874
	I45	0	0	7,99			0,974

D12 Service staff	I46	0	0	9,15	9,20	0,904	0,841
	I47	0	0	9,20			0,812
	I48	0	1	9,26			0,917
D13 Table set- tings	I49	0	0	8,83	8,40	0,756	Do not apply
	I50	0	2	7,97			Do not apply
D14 Environ- mental Actions	I51	0	36	7,03	6,60	0,890	0,787
	I52	0	29	6,38			0,918
	I53	0	37	6,38			0,807
D15 Accessibility for People with Special Needs	I54	0	15	4,46	4,25	0,932	0,908
	I55	0	11	4,92			0,919
	I56	0	16	3,67			0,910
	I57	0	14	3,96			0,918
	I58	0	21	3,02			0,926
	I59	1	29	5,49			0,937

Source: Own elaboration

Table 2 shows that the alpha value in all dimensions was higher than 0.60 – minimum recommended by Malhotra (2006) for exploratory studies. If some items are excluded, the reliability of the dimension to which these items belong increases. On the other hand, there is excluded items that reduce the reliability of the dimension.

Figure 1 shows the results of Analysis of Quartiles. Several critical items are associated with environmental conditions (servicescapes), such as parking ( $I_{35}$ ,  $I_{58}$ ), facilities design makes the restaurant attractive ( $I_{31}$ ), restaurant decor ( $I_{32}$ ) colors used in the environment ( $I_{33}$ ), signaling the environment ( $I_{36}$ ), background music ( $I_{26}$ ), electronic device ( $I_{41}$ ), and environmental actions ( $I_{51}$ ,  $I_{52}$  and  $I_{53}$ ). In particular, items related to facilities provided to special needs carriers are also critical and can be differences in relation to other restaurants. It also emphasizes that some of these aspects were considered in critical study by Barros et Freitas (2013).

PRIORITY		Critical															
		$I_{58}$	$I_{56}$	$I_{57}$	$I_{35}$	$I_{54}$	$I_{55}$	$I_{59}$	$I_{52}$	$I_{53}$	$I_{33}$	$I_{32}$	$I_{51}$	$I_{31}$	$I_{41}$	$I_{37}$	
		3,02	3,67	3,96	4,45	4,46	4,92	5,49	6,38	6,38	6,74	6,87	7,03	7,14	7,35	7,48	
		1st Quartile = 7,51															
		$I_{36}$	$I_{42}$	$I_{39}$	$I_{38}$	$I_{40}$	$I_{50}$	$I_{45}$	$I_{34}$	$I_{24}$	$I_{23}$	$I_9$	$I_{43}$	$I_{44}$	$I_{25}$	$I_{16}$	
7,54	7,63	7,72	7,93	7,93	7,97	7,99	8,03	8,11	8,36	8,37	8,39	8,45	8,56	8,56			
2nd Quartile = 8,56																	
		$I_6$	$I_{26}$	$I_{30}$	$I_{49}$	$I_{28}$	$I_{29}$	$I_{27}$	$I_{14}$	$I_{15}$	$I_{18}$	$I_1$	$I_{17}$	$I_{46}$	$I_7$	$I_{47}$	
8,59	8,76	8,86	8,86	8,91	8,94	9,00	9,03	9,10	9,14	9,15	9,15	9,15	9,20	9,20			
3rd Quartile = 9,20																	
		$I_{20}$	$I_8$	$I_{48}$	$I_2$	$I_{10}$	$I_{11}$	$I_{19}$	$I_3$	$I_4$	$I_{13}$	$I_{21}$	$I_{22}$	$I_5$	$I_{12}$		
9,23	9,23	9,26	9,31	9,40	9,41	9,42	9,43	9,43	9,45	9,45	9,49	9,55	9,59				

**Figure 1.** Quartiles analysis results

Source: Own elaboration

Chart 3 presents the comments of the restaurant manager in relation to critical priority items. The manager recognizes the need to make the environmental actions taken noticeable to customers. Deserves reflection the non inte-



rest even for issues related to colors and room decoration, because people do not go to a restaurant only to satisfy hunger, but also to celebrate special occasions with family and friends (Ha et Jang, 2012). The restaurant environment can influence mood and customer emotions (Jang et Namkung, 2009; Liu et Jang, 2009), which can possibly contribute to the perception of quality.

**Chart 3.** Analysis of critical priority items by the restaurant manager

Items	Comments by manager
I58: parking with spaces reserved for people with special needs	There is no parking, neither room to make one.
I35: Parking (existence and size of the waves, room to maneuver).	
I56: Bathrooms adapted for people with special needs.	There is no way to expand for lack of space.
I57: Communication (signs for toilets, adapted menus (Braille).	There is no adapted menu. Adjust the menu.
I54: Access (via ramps, stairs, handrails, elevator, tactile floor).	You need to improve access by providing a ramp.
I55: Circulation (suitable furniture and floors, lowering the sidewalks).	Due to the construction. Nothing to do
I59: staff trained to meet the special needs.	Demand is low. It is not feasible to hire an employee.
I52: Waste controls equipment (lighting sensors and water).	Ancient architecture. Change the sanitary discharge vessel, for example.
I53: Disclosure of information related to environmental issues.	No disclosure. Disclose on menus.
I33: The colors used create a cozy atmosphere.	Does not agree.
I32: The restaurant decor is attractive.	Does not agree.
I51: waste generated control (eg selective collection).	No disclosure. Make a disclosure to convey a positive image of the restaurant.
I31: The design of the facilities makes the restaurant attractive.	The structure is old, difficult to change.
I41: The appliances (TV, CD, DVD) add 'emotion' to the site.	There are two TVs. Sometimes a customer wants music, another wants to watch TV. Centering on one thing: music or TV.
I37: The signage in the environment of this restaurant provides adequate guidance.	No signs. Flag.

Source: Research data

High priority items were also commented on by the manager. In particular, the manager does not agree with the results related to furniture, tableware and comfort of the seats. On the other hand, the manager agrees with the limitation of space, negatively influencing the circulation and comfort of customers ( $I_{36}$ ,  $I_{39}$ ,  $I_{43}$  and  $I_{45}$ ). But, according to his perception, there is nothing to do.

However, it is possible that the amount of tables and chairs are not suitable for the room size. In this regard, it is appropriate to investigate a quantity of furnitures in order to reduce the identified weaknesses, but that does not harm the revenue of the property. As previously reported, there are items that are noticed and used by the customer and that can make your experience with the restaurant more enjoyable (or not). The identification of these aspects can contribute to improving the perception of quality.

The average ratings of overall performance level of the restaurant was 8.03. In the open questions (Block 3), suggestions for improvements were associated with the most pleasant and harmonious environment, expansion of the bathroom, adequate parking for people with special needs, larger amount of TVs, external and internal painting, better lighting, and service on Sundays at regular hours. All would recommend and return to the restaurant for various reasons, such as food and varied menu, family atmosphere, quality food and attentive attendants.

## 5. CONCLUSIONS AND MANAGERIALS IMPLICATIONS

As well as the assessment and classification of lodging facilities have been studied lately, the restaurant industry has attracted the attention of researchers from different areas of knowledge such as Administration, Tourism and Production Engineering.

Due to international events to be held in Brazil in the coming years, studies and practices applied to this issue become relevant, which motivated this study. In particular, this article investigated a methodological approach to measuring quality in an à la carte as perceived by customers.

Although many of the customers approached have alleged lack of time and chose not to participate, through this exploratory study, an analysis with the alpha coefficient of Cronbach, revealed that all 15 dimensions were considered reliable. With the data frequency distribution, important information regarding the customer profiles were obtained. The results of the analysis of quartiles indicated that some items associated with environmental conditions (of facilities design, restaurant decor, colors used in the environment, signaling, etc.) and aspects related to people with special needs were considered critical. Items related to the lack of



parking and space constraints can also negatively influence the quality perceived by customers.

The critical and high priority items were presented to the restaurant manager. This manager reported his opinion about the results found and highlighted a number of actions to be implemented in order to improve the quality of services provided.

In a more concise way, the major contributions of the results of this study are aimed at improving the quality of services provided by the restaurant analyzed. It is believed that the methodological approach should be applicable to the measurement of quality in other restaurants, consisting in a simple and practical tool for improving the management of the services of these organizations. However, generalizations and interpretations of these results should be performed sparingly compared with results from application of the approach in other types of restaurants.

Future studies may consider samples with a larger quantity of respondents, involving customers from several restaurants, which allows it possible the use of multivariate statistical techniques and results that are broader, ie not limited to a specific restaurant. For example, factor analysis can be used to verify the relationship between the variables (items) and group them into a smaller set of dimensions (factors), possibly reducing the number of items of data collection instrument. Multiple regression analysis can be used to identify which dimensions are more correlated with the overall quality of service. In particular, these aspects represent the main directions for the development of new research on the subject in question.

## REFERENCES

- Baker, J., Levy, M. e Grewal, D. (1992), "An experimental approach to making retail store environmental decisions", *Journal of Retailing*, Vol. 68, No. 4, pp. 445-460.
- Barros, M. D. et Freitas, A. L. P. (2012), "Avaliação da qualidade de serviços em restaurantes: uma proposta de modelo e estudo experimental", artigo apresentado no XIX SIMPEP: Simpósio de Engenharia de Produção, Bauru, SP, pp. 1-12.
- \_\_\_\_\_. (2013), "Service quality in restaurants: an experimental analysis performed in Brazil", artigo apresentado no XIX ICIEOM: International Conference on Industrial Engineering and Operations Management, Valladolid, Spain. v. 1. pp. 1-12.
- Bitner, M. J. (1992), "Servicescapes: the impact of physical surroundings on customers and employees", *Journal of Marketing*, vol. 56, pp. 57-71.
- BNDES – Banco Nacional de Desenvolvimento Econômico e Social (2005), "Setor de Turismo no Brasil: Segmento de Hotelaria". BNDES Setorial, Rio de Janeiro, No. 22, pp. 111-150,
- Disponível em [http://www.bndes.gov.br/SiteBNDES/export/sites/default/bndes\\_pt/Galerias/Arquivos/conhecimento/bnset/set2205.pdf](http://www.bndes.gov.br/SiteBNDES/export/sites/default/bndes_pt/Galerias/Arquivos/conhecimento/bnset/set2205.pdf) (Acesso em 28 de agosto de 2013).
- Cronbach, L. J. (1951), "Coefficient alpha and the internal structure of tests", *Psychometrika*, Vol. 6, No 3, pp. 297-334.
- Cronin, J. J. et Taylor, S. A. (1992), "Measuring service quality: a reexamination and extension", *Journal of Marketing*, Vol. 56, No. 3, pp. 55-68.
- Cronin, J. J. et Taylor, S. A. (1994), "Servperf versus Servqual: reconciling performance-based and perceptions-minus-expectations measurement of service quality", *Journal of Marketing*, Vol. 58, No. 1, pp. 125-131.
- Erdogan, N. et Baris, E. (2007), "Environmental protection programs and conservation practices of hotels in Ankara, Turkey", *Tourism Management*, No. 28, pp. 604-614.
- Freitas, A. L. P. (2005), "A qualidade em serviços no contexto da competitividade", *Produção on-line*, Florianópolis, Vol. 5, No. 1, pp. 1-24.
- Freitas, A. L. P. et Rodrigues S. G. (2005), "A avaliação da confiabilidade de questionários: uma análise utilizando o coeficiente alfa de Cronbach", artigo apresentado no XII SIMPEP: Simpósio de Engenharia de Produção, Bauru, SP, pp. 1-12.
- Freitas, A. L. P., Manhães, N. R. C. e Cozendey, M. I. (2006), "Emprego do SERVQUAL na avaliação da qualidade de serviços de Tecnologia da Informação: uma análise experimental", artigo apresentado no XXVI ENEGEP: Encontro Nacional de Engenharia de Produção, Salvador, BA, pp. 1-12.
- Freitas, A. L. P. et Almeida, G. M. M. (2013), "Classificação da qualidade de serviços em meios de hospedagem: uma abordagem exploratória", *Revista Hospitalidade*, São Paulo, Vol. X, No. 2, pp. 363-386.
- Gil, M. J. A., Jiménez, J. B. e Lorente, J. J. C. (2001), "An analysis of environmental management, organizational context and performance of Spanish hotels", *The International Journal of Management Science: Omega*, No. 29, pp. 457-471.
- Grönroos, C. (1984), "A service quality model and its marketing implications", *European Journal of Marketing*, Vol. 18, No. 4, pp. 36-44.
- \_\_\_\_\_. (1988), "Service quality: the six criteria of good perceived service quality", *Review of Business*, Vol. 9, No. 3, pp.10-13.
- Ha, J. et Jang, S. (2010), "Effects of service quality and food quality: The moderating role of atmospherics in an ethnic restaurant segment", *International Journal of Hospitality Management*, Vol. 29, pp. 520-529.
- IBGE – Instituto Brasileiro de Geografia e Estatística (2011), *Pesquisa de Serviços e Hospedagem* Disponível em: <http://www.ibge.gov.br/home/estatistica/economia/psh/2011.pdf> (Acesso em 29 de Setembro de 2013).



- Khan, M. (2003), "ECOSERV ecotourists' quality expectation", *Annals of Tourism Research*, Vol. 30, No. 1, pp. 109–124.
- Kim, W. G., Moon, Y. J. (2009), "Customer's cognitive, emotional, and actionable response to the servicescape: A test of the moderating effect of restaurant type", *International Journal of Hospitality Management*, pp. 144-156.
- Jang, S. S. et Namkung, Y. (2009), "Perceived quality, emotions, and behavioral intentions: Application of an extended Mehrabian – Russell model to restaurants", *Journal of Business*, Vol. 62, pp. 451-460.
- Liu, Y. et Jang, S-C. (2009), "Perceptions of Chinese restaurants in the U.S.: what affects customer satisfaction and behavioral intentions?", *International Journal of Hospitality Management*, Vol. 28, pp. 338–348.
- Malhotra, N. (2006), *Pesquisa de marketing: uma orientação aplicada*, 4 ed., Bookmam, Porto Alegre, RS.
- Mensah, I. (2006), "Environmental management practices among hotels in the greater Accra region", *International Journal of Hospitality Management*, Vol. 25, pp. 414–431.
- Min, H. et Min, H. (2011), "Benchmarking the service quality of fast-food restaurant franchises in the USA: a longitudinal study", *Benchmarking: An International Journal*, Vol. 18, No. 2, pp. 282-300.
- Parasuraman, A., Zeithaml, V. A. e Berry, L. L. (1985), "A conceptual model of service quality and its implications for future research", *Journal of Marketing*, fall, pp. 41-49.
- \_\_\_\_\_. (1988), "Servqual: multiple-item scale for measuring consumer perceptions of service quality", *Journal of Retailing*, Vol. 64, No. 1, pp. 12-39.
- Ryu, K., Han, H. (2011), "New or repeat customers: How does physical environment influence their restaurant experience?", *International Journal of Hospitality Management*, Vol. 30, pp. 599–611.
- Ryu, K. et Jang, S. (2007), "The effect of environmental perceptions on behavioral intentions through emotions: the case of upscale restaurants", *Journal of Hospitality & Tourism Research*, Vol. 31, No. 1, pp. 56-72.
- Shaharudin, M. R., Mansor, S. W. e Elias, S. J. (2011), "Food Quality Attributes among Malaysia's Fast Food Customer", *International Business and Management*, Vol. 2, No. 1, pp. 198-208.
- Silva, L. M. T., Medeiros, C. A. F. e Costa, B. K. (2009), "Qualidade dos serviços turísticos no setor de restaurantes: uma aplicação do modelo SERVPERF", *Revista Hospitalidade*, Vol. VI, No.2, pp. 115-139.
- Tinoco, M. A. C. et Ribeiro, J. L. D. (2008), "Estudo qualitativo dos principais atributos que determinam a percepção de qualidade e de preço dos consumidores de restaurantes à la carte". *Gest. Prod*, Vol.15, No.1, pp. 73-87.
- Wakefield, K. L et Blodgett, J. G. (1996), "The effect of the servicescape on customers' behavioral intentions in leisure service settings", *Journal of Services Marketing*, Vol. 10, No. 6, pp. 45-61.
- \_\_\_\_\_. (1999), "Customer response to intangible and tangible service factors", *Psychology and Marketing*, Vol. 16, No. 1, pp. 51–68.
- WTO - World Tourism Organization (2012), *UNWTO Tourism Highlights*, 12 ed., World Tourism Organization, Madrid, Spain.
- Zeithaml, V. A., Bitner, M. J. e Gremler, D.D. (2006), *Services Marketing: integrating customer focus across the firm*, 4 ed., McGraw-Hill, New York, NY.